C120-E184-09ENZ2(A)

Enhanced Support Facility User's Guide

for eXtended System Control Facility (PRIMEPOWER)

FUJITSU

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Preface

Purpose of this Manual

This manual describes the system monitor and control facility (eXtended System Control Facility, or XSCF, hereafter) used to control, monitor, operate, and service PRIMEPOWER series servers and their systems.　XSCF may also be referred to as the System Control Facility (SCF).

Audience

This manual is intended for users, specifically system management/maintenance administrators.

Organization

This manual consists of the following chapters:

Chapter 1 Overview of XSCF

This chapter provides an overview of the system monitor and control facility (XSCF).

Chapter 2 Setting Up XSCF

This chapter explains how to set up XSCF.

Chapter 3 Connecting XSCF or Server

This chapter explains the procedure for connecting consoles or terminals to have a access to XSCF, for connecting from UPC or to PC , and for construct RCI network.

Chapter 4 How to Use the Remote Panel

This chapter describes the Remote Panel that can be used on the XSCF Web function and explains how to use them.

Chapter 5 How to Use the XSCF Web Function

This chapter explains how to use the XSCF Web function.

Chapter 6 How to Use the XSCF Command Shell

This chapter explains how to use the XSCF command shell.

Chapter 7 XSCF SNMP Agent Function

This chapter describes the XSCF SNMP agent function.

Chapter 8 XSCF Mail Function

This chapter describes the XSCF mail function.

Chapter 9 XSCF REMCS Agent Function

This chapter explains the REMCS agent function via XSCF.

Chapter 10 XSCF Firmware Upgrade and Dump

This chapter explains how to upgrade the XSCF firmware, obtain a dump, and record logs.

Appendix A Warning And Information Messages

This appendix explains the error notification messages that XSCF outputs to the server OS console (standard console) or outputs by mail or the SNMP function.

Appendix B XSCF Log Information

This appendix describes XSCF log informations, which can be viewed on the XSCF console using XSCF commands.

Appendix C XSCF MIB

This chapter explains MIB(Management Infomation Base) that supported by the XSCF SNMP agent function.

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Appendix D Troubleshooting

This chapter describes problems that can occur during use of the XSCF console or during operation of the system and provides solutions for them.

Glossary

This appendix is a glossary of XSCF-related terms used in this manual.。

Related Manuals

Refer to the following manuals as necessary:

- *PRIMEPOWER250/450 User's Manual*
- *Enhanced Support Facility User's Guide*
- *Enhanced Support Facility User's Guide for Machine Administration*
- *Enhanced Support Facility User's Guide for REMCS*

About UNIX Commands

This manual does not include a description of general UNIX(TM) commands.
Refer to the documentation supplied with the software used by the system.

About Notation in This Manual

This manual uses the following fonts and symbols to express specific types of Information and nemonic name.

Text Conventions

Table P-1 Notation

Item	Use and example
Xx123@@	**Use:** The characters coded in a command displayed on the OS console and the variables in a command option are indicated in italic. **Example:** The prompt on the server's OS console changes to ***ok***. env-monitor scsi_bp*n* (*n* =0.1)
Xx123@@	**Use:** The titles of chapters and tables and terms that are being emphasized indicated in bold. **Example: 6.6 Other Commands**

Shell Prompts

Table P-2 Shell prompts

Shell	Prompt
eXtended system Control Facility	SCF>
Other shell	machine_name% machine_name# $ #
OpenBoot PROM	ok

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About model name

When this manual describes the PRIMEPOWER model name, it uses the nemonic name as follow.

Table P-3 Model name and Mnemonic

Model name	Mnemonic
PRIMEPOWER250 Rackmount Type（2U）	250-R
PRIMEPOWER250 Rackmount Type（4U）	250-R4
PRIMEPOWER250 Pedestal Type	250-P
PRIMEPOWER450 Rackmount Type（4U）	450-R
PRIMEPOWER450 Rackmount Type（7U）	450-Q

* For the model name of which the input power source is the DC Type, see the *User's Manual* for the server.

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Acknowledgement

The TCP/IP-based communication functions of the LAN-communication administration functions described in this manual were developed by Fujitsu Ltd. according to BSD NETWORKING SOFTWARE RELEASE 1, 4.4 BSD Lite 2, and their documentation under license from the University of California at Los Angels (UCLA). We express our gratitude to the Computer Systems Research Group and Electrical Engineering and Computer Science Department at UCLA, Berkeley.
Note that Fujitsu Ltd. holds the copyright on the TCP/IP-based communication functions for XSCF and any secondary documentation related to them.

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XSCF Web Access was developed with the use of Apache and OpenSSL and mod_ssl. We would like to express our gratitude to the Apache Group, OpenSSL Project, Mr. Eric Young and mod_ssl project.
This product includes software developed by the Apache Group for use in the Apache HTTP server project (http://www.apache.org/).

This product includes software developed by the OpenSSL Project for use in the OpenSSL

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Toolkit. (http://www.openssl.org/)

This product includes cryptgraphic software written by Eric Young (eay@cryptsoft.com).

This product includes software developed by Ralf S. Engelschall <rse@engelschall.com> for use in the mod_ssl project (http://www.modssl.org/).

September 2006

September 2006, Nineth Edition
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Important

Do not copy the whole or any part of this manual without permission.
This manual is subject to change without prior notice.
Electrical form of this manual is installed under following path:
The revised edition for this manual can be referred to from the following path on the Hardware Control Program-CD*: Path: /PWPL0/MANUAL
*Hardware Control Program(:HCP) (: HCP is a control program of hardware that configures a computing system.)

When you face different description written on the online manual from what written on paper manual, please follow the online manual.

The MIB new file can be refferred to from the following path in the HCP-CD.
/PWPL0/MIB

Caution

The following function will be supported at HCP version 0501 or later. Please ask Sales Department the obtaining method.

- In Chapter2 and Chapter8 on first edition of this manual, the menu of "Name server configuration" in Machine Administration Menu was not exist at HCP version 0201 or before. But now it is suppoted.

On the Menu, this enabled you to specify the host name, not only IP address of SMTP server. Also you can specify the host name of POP server which is enabed at HCP vertsion 0501. For more information about it, see “Chapter2 Setting Up XSCF”.

> About "**The DNS function in case of using XSCF Mail function (Sending method with MX record, but SMTP server not used.)**", we have said that it will be to support at HCP version 0201 or later in first edition Revision1 of this manual. However, we do **not support** because of the following reasons:
> 1)You can use the Mail Sending function via a SMTP server.
> 2)Development convenience.

- In Chapter10 of this manual, the method of firmware update in the "Registration from

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applying of the ESF patch".

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Changes history

Summary of Changes in Nineth Edition

The current, nineth edition of this manual differs from previous edition principally by containing the front matter modification of this manual and the corrections of descriptions about the error code. The nineth edition contains minor clarifications and corrections and also the following significant changes relative to the previous edition.
[September 2006]

Cover: This manual title is changed since ESF3.0.
Preface and Contents: The layout are changed in the front matter.
Appendix B, "XSCF Log Information":

- "XSCF Error Log List" are corrected.
  - Error codes, xxxD00yy, 8xx060yy and 9xx060yy are corrected.
  - Error code numbers are corrected as below:
    2E0000FF -> 2E00000n, 2E1000FF -> 2E10000n, xxxD006n -> xxxD00yy

Summary of Changes in Eighth Edition

The current, eighth edition of this manual differs from previous edition principally by containing the addition of descriptions about the XSCF Administration on the command line. The eighth edition contains minor clarifications and corrections and also the following significant changes relative to the previous edition.
[November 2005]

Chapter 2, "Setting Up XSCF":

- In "XSCF Setup Flow ", a description of the start up of the Machine Administration Menu is added.
- In "Network Configuration", "User Account Administration", "Console Administration", "XSCF Web Administration", "SNMP Administration", and "Mail Administration", descriptions of the setting on the command line of the Machine Administration function are added. For these command addition, descriptions are added to Chapter 6, Chapter 7, Chapter 8, Appendix D, and Glossary.

Chapter 3, "Connecting XSCF or Server":

In “How to change the input-output destination of OS console to tty-a”, a description of the MODE switch the re-setting is added at the "[1] Changing the environment variable properties of NVRAM.".

Chapter 10, "XSCF Firmware Upgrade and Dump ":

In "Before upgrading firmware", a description of the cluster system manual is added.

Summary of Changes in Seventh Edition

The current, seventh edition of this manual differs from previous edition principally by containing the corrections of descriptions about the error code. The seventh edition contains minor clarifications and corrections and also the following significant changes relative to the previous edition.
[February 2005]

Preface:

- In "[Important]" of “About This Manual”, description which this manual can be referred to from a server path, is deleted.

Chapter 6, "How to Use the XSCF Command Shell":

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- In set-console-device, "Caution for use" is added.

Appendix B, "XSCF Log Information":

- "XSCF Error Log List" are corrected.
  - Error codes 1300000X, 1500000X, 1600000X, 1700000X, 1800000X, 1810003D, 1820003D, 190000FF, 1A0000FF, 1C00002n, 1D00004n, 1E0000XX, 1F000044, 21000045, 230000FF, 240000FF, 250000FF, 250000FF-(2), 2E200000, 8E208900, C1001100, C1001200, C1001300, CE209900, DF000100 and DF001000 are corrected.
  - Error code numbers are corrected as below:
    130000FF -> 1300000X, 150000FF -> 1500000X, 160000FF -> 1600000X, 170000FF -> 1700000X, 180000FF ->1800000X, 181000FF -> 1810003D, 182000FF -> 1820003D, 2E2000FF -> 2E200000

Appendix D, "Troubleshooting":

- In "Troubleshooting XSCF and FAQ", descriptions of FAQ are added.

Summary of Changes in Sixth Edition

The current, sixth edition of this manual differs from previous edition principally by containing the addition of descriptions about the error code. The sixth edition contains minor clarifications and corrections and also the following significant changes relative to the previous edition.
[July 2004]

Chapter 1, "Overview of XSCF":

- In "Types of Connection to XSCF", a description of tty-a console path is added.

Chapter 6, "How to Use the XSCF Command Shell":

- In "nodeled" command, note is added.

Chapter 7, "XSCF SNMP Agent function": In "About Traps", Note about the target parts for trap is added.

Appendix A, "Warning And Information Messages":

- "Control execution messages during the monitoring for foreseeable faults " is added.

Appendix B, "XSCF Log Information":

- "XSCF Error Log List" are corrected.
  - Error codes 07060030, 07140031, 0801000X, 0A00000X, 0A1z000X, 0C00000X, 10100030, 150z000n, 153A000X, 1A00000n, 21000045, 250000FF-(2), 33000039, 330000FF, 330000FF_(2), 4D0008FF, 4E07200n, 5080000n, 9080000n, D080000n and xx0000FF are added.
  - Error code number is corrected as below:
    xx0B0030 -> xxxB0030, xx0C000n -> xxxC000n, xx0D006n -> xxxD006n
  - In Table "POST/OBP test phase number", USB is added.
- "XSCF Power Log List" are corrected, added or deleted.
  - Power-on: In the "Retry" definition, the "The retry is caused by for the server cooling." is added.
- "XSCF Event Log List" are corrected.
  - Temperature change event: A definition of x30, "The PSU cooling is done by control of the monitoring for foreseeable fault." is added.

Appendix C, "XSCF MIB ": In Table C-9, C-13 and C-14, descriptions are added.

Summary of Changes in Fifth Edition

The current, fifth edition of this manual differs from previous edition principally by containing the addition of descriptions about Troubleshooting. The fifth edition contains minor clarifications and corrections and also the following significant changes relative to the previous edition.
[January 2004]

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Chapter 3, "Connecting XSCF or Server":

- In “Connecting Terminals to XSCF”, Not to use the XSCF command to set whether to use a standard console via the serial port (tty-a) or the SCF-LAN port but to do by the Machine Administration Menu, the description is corrected.
- In “Connecting Terminals to XSCF”, a description of setting of the terminal software on the serial port(tty-a) terminal is added.

Chapter 5, "How to Use the XSCF Web Function ":

- In "Overview of the XSCF Web Function", sample pages of Web browser are added.

Chapter 6, "How to Use the XSCF Command Shell":

- In set-console-device, "lan" option is deleted.
- The command of “send-break” is added.

Appendix A, "Warning And Information Messages":

- "System messages" are corrected.
  - “Hardware configuration error” is added.
  - RCI address is added in “Detected failure on the RCI node”.
  - Messages of the errors detected by only POST/OBP are added.
  - The description about the message which is not displayed partially is added.

Appendix B, "XSCF Log Information":

- "XSCF Error Log List" are corrected.
  - Error codes 281000XX, C1001300, C203030n and FF0000FF are added.
  - Error codes 8E07200n, C1001200 and FE0000FF are corrected.
- "XSCF Power Log List" are added.
  - XIR: In the Source definition, "ACK timeout" is added.
  - Error code number is corrected as below:
    C311000n -> 8311000n, C3120000 -> 83120000, C313000n -> 8313000n, C314000n -> 8314000n
- "XSCF Event Log List" are corrected.
  - Unit configuration change: A definition of x81 is added.

Appendix D, "Troubleshooting":

- In "Troubleshooting XSCF and FAQ", descriptions of FAQ are added.
- In "Troubleshooting the Server While XSCF Is Being Used" are corrected.

Glossary :

- In the term "Standard consol", Not to use the XSCF command to set whether to use a standard console via the serial port (tty-a) or the SCF-LAN port but to do by the Machine Administration Menu, the description is corrected.

Summary of Changes in Fourth Edition

The current, fourth edition of this manual differs from previous edition principally by containing the addition of detailed explanations for Firmware Upgrade and the addition of descriptions about information Messages. The fourth edition contains minor clarifications and corrections and also the following significant changes relative to the previous edition.

[October 2003]

Chapter 10, "XSCF Firmware Upgrade and Dump":

- The detail information of the method of firmware upgrade are added.

Appendix A, "Warning And Information Messages":

- In "Message Types", “Other information messages” are added.

Appendix B, "XSCF Log Information":

- "XSCF Error Log List" are corrected.

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- Error codes 4201010n(Notice), 8E20F800 and FE0000FF are added.
- Error codes 250000FF, 4201810n, 42040100, 42048100 and 8E20FA00 are corrected.

- "XSCF Event Log List" are corrected.
  - Powerlog: A definition of x50 is added.

Appendix C, "XSCF MIB ": In Table C-14 “Fujitsu extended TRAP", Since the contents of the MEANING of TRAP-TYPE ”scfHardwareErrorRepair” and “scfHardwareDefectRepair” are reverse, they are exchanged.

Summary of Changes in Third Edition

The current, third edition of this manual differs from previous edition principally by containing the addition of REMCS agent function and the addition of SSH function for the strengthening of network security. The third edition contains minor clarifications and corrections and also the following significant changes relative to the previous edition.
[July 2003]

Preface:

- In “About model name”, model-name, PRIMEPOWER250 Rackmount Type（4U） and Mnemonic, 250-R4 are added.
- In "Caution", a description is added that we support "Name server" menu.

Chapter 1, "Overview of XSCF":

- In "Types of Connection to XSCF" and “XSCF User Interfaces”, descriptions of SSH are added.

Chapter 2, "Setting Up XSCF":

- Sections of “REMCS Environment Setting via XSCF” and “SSH Administration” are added.
- In “XSCF Setup Flow”, descriptions of REMCS and SSH are added.
- In “Network Configuration”, descriptions of Name server are added.
- In “Table 2-3 XSCF Console Administration”, descriptions about SSH are added. And in “Read-only console”, the connection number of telnet port is changed to “3” from “2”.
- In “Mail Administration”, descriptions of host name specification and POP authentication are added.

Chapter 3, "Connecting XSCF or Server":

- In “Connecting Terminals to XSCF” and “Types of XSCF Connection”, descriptions of connecting to XSCF using SSH are added.
- In “Table3-1 Connected terminal types”, descriptions about SSH and SSH port numbers are added. In Read-only port, the number “8013” of telnet port is added. The port number 80 is deleted.
- In “Connecting Terminals to XSCF”, a description of the processing for switching the standard console port (OS console) to the serial port(tty-a) forcibly is added.
- In "Method of constructing RCI", the command “rci-config-init” is corrected to “rci-configio-init”.

Chapter 4, "How to Use the Remote Panel":

- In "Table 4-1 Remote panel components"and “How to Use the Remote Panel”, descriptions of enabling the switch operation are added.

Chapter 5, "How to Use the XSCF Web Function ":

- In "Table 5-1 XSCF Web function pages", description of “Note” is added.
- In "Table 5-2 Supported browsers", version of browsers is changed. And Mozilla is deleted. Netscape Communicator(TM) is added.

Chapter 6, "How to Use the XSCF Command Shell":

- The commands of “logtest”, "show-mail-report", "show-remcs", "show-connections",

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"hangup" are added.

- In "Login to XSCF User Account" and "show-access-logs" command, descriptions aboout SSH are added.
- In "help" command, the view of command detail information is added.
- The command authority level in the "show-shell-command" command is corrected.

Chapter 7, "XSCF SNMP Agent function": In "Introduce Extended MIB of XSCF to SNMP Manager", Descriptions of MIB file in HCP-CD are added.

Chapter 8, "XSCF Mail Function ":

- In “Overview of XSCF Mail Function”, descriptions of POP authentication are added.
- In “Setting up the XSCF Mail Function”, a setting of POP authentication server is added. And description of host name specifying is added.
- Figures 8-1 is changed.
- In Figures 8-4 – 8-7, Mail contents are changed.
- In “Contents of Parts Fault Notification”, a fault part “PCI-RISER” is added.
- “System Damage Level” is added in contents of mail.
- In “Table 8-1 Network access types and port numbers”, “SSH” ports is added. TELNET(23) port number is deleted.

Chapter 9, "XSCF REMCS Agent Function" is added newly.

Chapter 10, "XSCF Firmware Upgrade and Dump": This is moved from Chapter 9.

- The method of firmware update in "Registration from applying of the ESF patch" are added.

Appendix B, "XSCF Log Information":

- "XSCF Error Log List" are corrected.
  - Error codes 501030FF, 501031FF, 501040FF-501050FF, 6100000n-620100FF, C20302FF and C3170000 are added.
  - Error codes 4201010n, 4201810n, 42040100, 42048100, 8201020n, 8201050n, 830101FF, 830104FF, 83020100, 830B010n, 830B0D0n, 830B0F0n, 830B110n, 830E000n, 8313010n, 8314010n, C201020n, C201030n, C2010400, C3010000, 3020000, C3030000, C3050000, C30B020n, C30B0E0n, C30B100n, C30B120n, C30E010n, C30F0000, C313000n, C314000n, C3160400, CE03050n, CE04030n, CE201000 and C30F0000 are corrected.
  - Error code number is corrected as below:
    60000100 -> 60000200
- "XSCF Power Log List" are corrected.
  - When the input power source is the DC Type, The type names of “01:PSU-ON” and “50:PSU-OFF” are added.
- "XSCF Event Log List" are corrected.
  - Access: Definitions of x50, x51, x52 and x53 about SSH are added.
  - Author: Definitions of x50, x51, x52 and x53 about SSH are added.
  - RCI: In the “x10, The RCI sending event was executed” and the “x20, The RCI receiving event was executed”, the definitions of Byte1 or later are corrected.
  - RCI: In the "x30, The RCI initial operation was executed”, the definition of initial address is added. And in the "x31, The RCI initial configuration was executed” and “x32, The RCI initial configuration was executed again”, the definitions of Node ID are corrected.
  - Power event is added.

Appendix C, "XSCF MIB ": In Table “Fujitsu extended TRAP", ”aplNetSCF” is changed to “scfObjects”.

Appendix D, "Troubleshooting":

- In "Could not connect using telnet to XSCF via the SCF-LAN", descriptions of check

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items are added.

- "Could not connect using SSH to XSCF via the SCF-LAN" is added.
- “XSCF shell was suddenly disconnected while using SSH” is added.
- In “Output on Standard console(OS console) connected to the LAN suddenly stopped”, a description about the processing for switching the standard console port (OS console) to the serial port(tty-a) forcibly is added.
- In "A console the XSCF shell or a standard console was suddenly disconnected", a description of "Name Server Configuration" is added.
- In "A mail report was not received from XSCF", descriptions of check items are added.

Glossary :

- In the term "Standard consol", a description about SSH is added. And a description of TELNET(8013) port is added.
- The terms “Cluster control software”, "REMCS" and “SSH” are added.

Summary of Changes in Second Edition

The current, second edition of this manual differs from previous edition with Revision1 principally by containing the menus of Machine Administration function. The second edition contains minor clarifications and corrections and also the following significant changes relative to the previous edition with Revision1.

[April 2003]

Preface:

- In "Caution", a description is changed that we do not support "The DNS function in case of using XSCF Mail function".
- In "Caution", a description of "XSCF SNMP Agent function" is deleted.

Chapter 2, "Setting Up XSCF":

- The menu name of "Basic configuration" and the described section is changed to two new menus, "Network Configuration" and "Console Administration". The contents are as follows.
  - In the menu of "Basic configuration", each options, "Basic network configuration" and "Host name configuration" are moved to "Network Configuration" menu. The section of "Network Configuration" is added.
  - In the menu of "Basic configuration", each options, "Select Standard console", "Access control of console port", and "Auto-disconnect administration" are moved to "Console Administration" menu. The section of "Console Administration" is added.
  - The section of "Basic configuration" is deleted.
- Option and description of "Name server configuration" in all menu is deleted. (In Chapter8 and AppendixD, descriptions of "DNS function" or "Name server configuration" are deleted at the same time.)
- In "Console Administration", a description of "Caution" is added in "Access Control of Read-only Console"'s Remarks of Table 2-3.

Chapter 3, "Connecting XSCF or Server":

- In "Connecting Terrminals to XSCF", descriptions are added as follows:
  - A description of "Read-only console" is added in Table3-1.
  - A description of "break" is added.
- In "How to Configure RCI", the definition of "Automatic power-on prohibition mode after the forced power off " in the mode "mode of power supply for remote control " is added.
- "How to change the input-output destination of OS console to tty-a" is added.

Chapter 4, "How to Use the Remote Panel": In "Before using the remote Panel", a description

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of "Basic settings" is changed to "Network settings" and "Console settings".

Chapter 5, "How to Use the XSCF Web Function ":

- In "Table 5-1 XSCF Web function pages", a description of "Authentication" page is added.
- In "Function to be enabled on the browser", Items are corrected as follows:
  - A description of option setting on *Microsoft(R) Internet Eplorer* is added.
  - In "Cookies", a description of "(in cache only; it don't have to be stored)" is deleted.
- In "Logging In to or Out from XSCF", a description of "Condition" of "Logging out from XSCF"is corrected.

Chapter 6, "How to Use the XSCF Command Shell":

- The commands of "net-status", "show-shell-command" are added.
- A note in the "set-console-device" command is added.

Chapter 7, "XSCF SNMP Agent function": In "Installation case to SystemWalker", Descriptions of "a setup which calls "XSCF WEB function from SystemWalker" is added.

Chapter 8, "XSCF Mail Function ":

- In "Features of the XSCF mail function", Description of "Sending e-mail directly" by setting name server is deleted.
- In "Setting up the XSCF Mail Function", description of name server setting at Step 1 and Note are deleted. At Step1, the "Mail administration" menu of the Machine Administration menu is described.

Appendix B, "XSCF Log Information":

- "XSCF Error Log List" are corrected.
  - In the hardware which detects an error , "Machine Administration" is added. Therefore, some tables at each error level are added.
  - The following error code numbers are corrected.
    4E20F500 -> 4E20F50n, 82130400 -> C2130400, C21110FF -> C2111000, C21111FF -> C2111100, C21112FF -> C2111200
  - Descriptions of error codes 408055FF, 430103FF, 431501FF, 4E20F00n, 4E20F600, 501012FF, 830B130n, 830E000n, 8E07200n, 8E20F40n, C202020n, C202050n, C2111000, C2111100, C2111200, C2130400, C30B140n, C30E010n(Alarm), C30E010n(Warning), C30E020n, C30E030n, C30E040n, C30E050n, CE20020n and CE20040n are corrected.
  - Error codes 41110000, 430E060n, 46110000, 60000100, 81110000, 86110000, 8E208500, 8E208600, 8E20F700, A0000100, C1110000, C20107FF, C6110000, CE209400, CE209500, CE209600 and E0000100 are added.
  - Error codes 431608FF, 501030FF and 501031FF are deleted.
  - In Table parts number, U2P, Error log for test, IO-BP, POWER-BD and PSU-CAGE are added.
  - Components, U2P and U2P(Timer) numbers are corrected as below:
    #0-#3 -> #0,#2,#3
- "XSCF Event Log List" are corrected.
  - Power: The definition of Byte1 and Byte2 are corrected. In the "VV" definition, "x05, A power supply error occurred" , the definition of Byte1 and Byte2 are added.
  - Nodeself: In the "The sensor failed" definition, the detail definitions are added.
  - Config: The bits definition of "ss, the old unit status" is added.
  - The term of factor "SparcReq" is corrected to "CPUReq".
  - SparcReq: In the "VV" definition, "Request to SPARC for event " is added. In the "Request to SPARC for shutdown" definition, descriptions of "event code" and "Detailed code" are added.

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- Panel: In the "Operation panel events" definition, "x82, The RESET switch button pressed for a long time" is deleted.
- Console:
- RCI: The definitions are added. These are:
  "x10, The RCI sending event ", "x20, The RCI receiving event "
  "x30, The RCI initial operation", "x31, The RCI initial configuration"
  "x32, The RCI initial reconfiguration ", "x3F, The RCI configuration result "

Appendix C, "XSCF MIB ": Object ID and Table of "scfMonitor group" is added.

Appendix D, "Troubleshooting":

- In "A console the XSCF shell or a standard console was suddenly disconnected", a description of "Name server configuration" is deleted.
- In "Could not log in to XSCF Web function", the description is all corrected.
- In "Do not know the IP address of XSCF", a description of "Show current configuration" of "Basic configration" is changed to "Network Configuration".

Glossary :

- The term "SCF-IMAGE" is changed to "WEBDATA".
- The term "Shadow console" is changed to "Read-only console". And the port number "8101" is corrected to "8011".
- The terms of "IO-BP", "POWER-BD" and "PSU-CAGE" are added.

Summary of Changes in First Edition Revision1

The first edition Revision1 of this manual contains minor clarifications and corrections and also the following significant changes relative to the first edition.

[February 2003]

Preface: Acknowledgement about SSL is added.

Chapter 6, "How to Use the XSCF Command Shell":

- A description of the setting and view of XSCF shell login keyword is added.
- The command of "set-shell-command" is added.

Chapter 8, "XSCF Mail Function": "Contents of Suspension Mail Notification" is added.

Chapter 10, "Troubleshooting": This is moved to Appendix D.

Appendix B, "XSCF Log Information":

- "XSCF Error Log List" are corrected or added.
  - Description of error code 8E20F40n is corrected.
  - Error code 8E20FB0n is added.
- "XSCF Power Log List" are corrected, added or deleted.
  - 40:Shutdown(ALM) is corrected to 41:Shutdown(ALM).
  - Shutdown(ALM): In the "Power supply monitoring" and "Temperature monitoring" definition, the "because of sensor error" are added.
  - Power-off: In the "Power supply monitoring" definition, the "because of sensor error" is deleted.

Appendix D, "Glossary": Finding "Appendix" is deleted.

First Edition

First Edition setting.

[February 2003]

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Chapter1 Overview of XSCF

This chapter provides an overview of the system monitor and control facility (eXtended System Control Facility, or XSCF).

This chapter has the following contents.

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1.2 Types of Connection to XSCF 1-5
1.3 XSCF User Interfaces 1-7
1.4 XSCF Monitoring and Linkage to Other Functions 1-9
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1.1 XSCF Features

XSCF is a system monitor/control facility that consists of processors independent of the CPU on a server. Even though the server is turned off, XSCF is always able to monitor the server and provide a user interface as long as the power is supplying to the system via power cables.

XSCF is single centralized point for control of cooling system (fan units), power supply units, system status monitor, power-on and power-off of peripheral devices, and error monitor. XSCF offers several features to achieve greater reliability and availability. For instance, with using XSCF, 1) you can monitor a server over a serial port or Ethernet so that the user can control the server from a remote location, you can even use console from the remote location, 2) errors or failures will be reported to the system administrator, automatically.

XSCF has the following features:

1. Power control
   XSCF can be used to turn on or off server power as indicated below in addition to the power button on the operating panel.

- Remote operation for power-on, power-off, and reset
  You can turn on, turn off or reset the server with using the **XSCF shell** command or the remote panel of the **XSCF Web function** from a remote terminal, which is connected to XSCF over a LAN. When you instruct power-off, system will execute shutdown of OS, then the power will be turned off.
  For information about the XSCF shell, see "Chapter6 How to Use the XSCF Command Shell". For information about the XSCF Web function, see "Chapter5 How to Use the XSCF Web Function".

- Cancelling power-on when an error is detected
  This feature automatically shuts down the OS and prevents implementation of the poweron sequence, if a system error occurs, to minimize the effects of the error on the system.

- OS startup control for power failure
  XSCF performs the operations below if a power failure that causes the server to turn off occurs:

  — When a power failure occurs
    XSCF automatically shuts down the OS. If there is no uninterruptible power supply unit (UPS), XSCF performs emergency power-off. For a momentary power failure, XSCF may allow system to continue working without any shutting down.
  — When power is restored
    XSCF automatically turns on the power to the server, then starts up the OS, relieving the administrator of extra work.
    On your decision, it is possible to disable automatic power-on triggered by power restoration.

  For information about the settings for a power failure, see the *Enhanced Support Facility User's Guide for Machine Administration* for the Enhanced Support Facility (ESF).
  For more information about the remote panel, see "Chapter4 How to Use the Remote

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Panel".

2. Assistance in hot swapping the power supply and fans
   XSCF provides assistance in hot swapping in conjunction with the Machine Administration Menu. For information about the Machine Administration Menu, see the *Enhanced Support Facility User's Guide for Machine Administration* for ESF.

3. Stronger monitoring functions
   More powerful monitoring functions monitor, among other items, fans, temperature inside the server, and ambient temperature.

4. Networking features
   To provide system-independent access to the server, XSCF provides networking functions that do the following:
   - Monitor the server even when the OS is inactive.
   - Enable remote operation of the server.
   - Report error messages by e-mail to specified addresses.

5. Hardware failure log
   XSCF logs information about hardware failures. The XSCF hardware failure log makes it possible to identify the location of a failure. The log also provides assistance in anticipating failures on the server and immediately reports precise information about failures to the user.
   XSCF logs the types of information listed below. For information about error messages, see "Appendix B XSCF Log Information".

- Initial diagnosis on system startup
  The system performs a self-diagnosis. If errors are detected in the diagnosis, error messages are generated and displayed.

- Network configuration monitor
  XSCF monitors the LAN configuration. If an error is detected, an error message is generated and displayed.

- Monitoring of the power supply, fans, DC voltage, system board, memory, CPU, and other components
  XSCF monitors the status of each component. In an error is detected in a component, an error message is generated and displayed. Based on the error message, the system administrator can easily identify a component that needs to be replaced.

- Temperature monitor
  XSCF monitors the temperatures of the cabinet and CPU. If an abnormal temperature is detected, an error message is generated and displayed. The error messages make it possible to prevent the server from rising to a higher temperature and to prevent server instability.

- RCI device configuration monitor
  XSCF monitors RCI devices. If an error is detected in an RCI device, an error message is generated and displayed. Based on the error message, the system administrator can immediately identify an error in the RCI device configuration.

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6. Security

XSCF logs incorrect accesses and unauthorized access to the system. The log can be used to immediately determine the cause of an abnormal system operation.

Note:

Status of components informed by XSCF could be different from one, which is informed by machine administration menu of ESF.

While Solaris OS is running, some of hardware components, such as CPU, is managed by Solaris OS. And, change of some status, such as degradation of CPU by Solaris OS, may be informed to XSCF only during shutting down or rebooting.

Therefore, different information could be displayed between XSCF and machine administration menu.

To check the current system status during Solaris OS is running, using machine administration menu is recommended.

Next: 1.2 Types of Connection to XSCF

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1.2 Types of Connection to XSCF

This section outlines types of connection to XSCF. For more information about each type, see the *User's Manual* for the server.
XSCF enables access to the server over a serial (RS-232C) port or from networks connected to SCF-LAN.

Figure 1-1 outlines connection to XSCF.

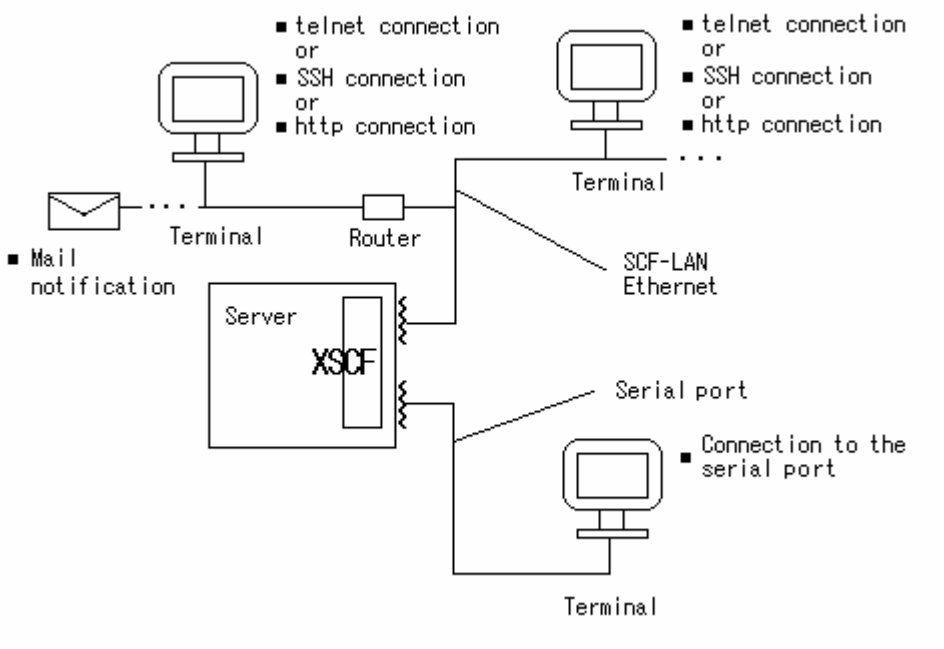

Figure 1-1 Connections to XSCF

Note:
We strongly recommend that you should set the input-output destination of the OS console to the tty-a (Especially, when you use the graphic card). For more detail about changing the console to "tty-a", see "Chapter3 Connecting XSCF or Server".

Figure 1-1-1 shows the tty-a console path.

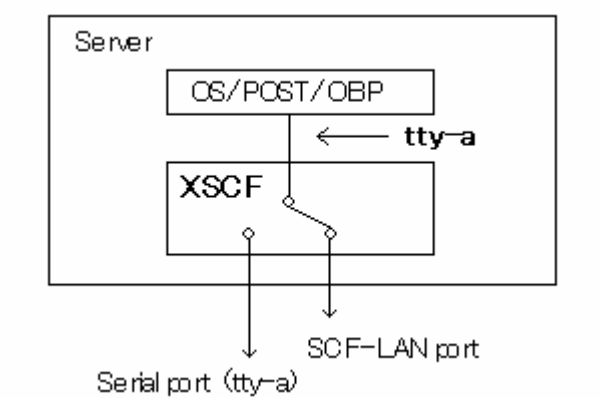

Figure 1-1-1 tty-a console path

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The console Interface between OS/POST/OBP and SCF is called tty-a. As shown in Figure 1-1-1, the input-output destination of the OS/POST/OBP console is devided into two ports in XSCF. Thus, it is possible to choose serial port(tty-a) or SCF-LAN port as a tty-a console. For the input-output destination of the console, use the "Console Administraiotn" of the Machine Administration Menu to select one or the other. For the Machine Administration Menu used to select ports, see "Chapter2 Setting Up XSCF".

As shown in Figure 1-1, there are two types of connections to XSCF:

- Serial port (tty-a)
- SCF-LAN Ethernet

Serial port (tty-a)

The serial port enables UNIX workstations, Windows PCs, and ASCII terminals to connect to XSCF through the serial (RS-232C) port. The XSCF shell can be used with the serial port.

SCF-LAN Ethernet

SCF-LAN Ethernet enables UNIX workstations, Windows PCs, and ASCII terminals to connect to XSCF through the SCF-LAN port. The following can be used with SCF-LAN Ethernet:

- XSCF shell in a telnet or SSH connection
- XSCF Web function in a browser
- SNMP traps
- Mail reports

For more information about the above items, see the following chapters:

- Connection to terminals: "Chapter 3 Connecting XSCF or Server"
- XSCF shells: "Chapter6 How to Use the XSCF Command Shell"
- XSCF Web function: "Chapter4 How to Use the Remote Panels" and "Chapter5 How to Use the XSCF Web Function"
- XSCF SNMP agent function: "Chapter7 XSCF SNMP Agent Function"
- XSCF Mail function: "Chapter 8 XSCF Mail Function"
- XSCF setup: "Chapter2 Setting Up XSCF"

Next: 1.3 XSCF User Interfaces

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1.3 XSCF User Interfaces

XSCF provides the following user interfaces:

To use the function to explain as follows, the account registration to XSCF is needed.
Please do the account registration before you start using the XSCF functionality. (No pre-defined account is registered for the security reason.) In addition, we strongly recommend you to register an account for our field engineer (hereafter, FE) during initial set up in consideration of possible future maintenance work by FE.

- **XSCF shell (1)**:

Command line interface of XSCF shell that you can use from PC or any other terminal, which is connected to XSCF over SCF-LAN ethernet with using telnet or SSH.

- **XSCF shell (2)**:

Command line interface of XSCF shell that you can use from PC or any other terminal, which is directly connected to XSCF by serial port.

- **Standard console (1)**:

Console of the system that you can access from PC or any other terminal, which is connected to XSCF over SCF-LAN Ethernet with using telnet or SSH.

- **Standard console (2)**:

Console of the system that you can access from PC or any other terminal, which is directly connected to XSCF by serial port.

- **XSCF Web function** :

Graphical user interface of XSCF achieved with help of any Web browser, which is connected to XSCF over SCF-LAN Ethernet.

- **XSCF SNMP agent function**:

SNMP agent in XSCF that you can monitor PRIMEPOWER as a part of large scale network system, to which XSCF is connected, in conjunction with SNMP manager.

- **XSCF mail function**:

Mail report that XSCF can inform the status of PRIMEPOWER to your any mailer, such as your PC or your cellular phone, over SCF-LAN network.

XSCF allows up to two XSCF shell terminals at the same time when both SCF-LAN and serial port are in use. In addition, XSCF enables multiple XSCF Web sessions. The "Standard console" (OS console) can be used on either type of connection.

For information about connection to XSCF consoles, see "Chapter 3 Connecting XSCF or Server".

To use these XSCF interfaces, users need to log in to XSCF with an XSCF account, then enter a password. If a user failed to log in to XSCF five or more consecutive times within 3 minutes due to invalid acount or password, a login failure is e-mailed to the system administrator. When a user successfully logs in to XSCF but the user leaves the session without any activities for a specified length of time, XSCF automatically logs the user out.

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For information about the how to log in to XSCF, see "Chapter6 How to Use the XSCF Command Shell". For information about authentication and the XSCF Web function, see "Chapter5 How to Use the XSCF Web Function". For information about registration of accounts and mail settings, see "Chapter2 Setting Up XSCF".

The table below shows which XSCF functions can be used on either type of connection.

Table 1-1 XSCF functions usable on the serial port and SCF-LAN Ethernet

Function	Description	Serial port	SCF-LAN Ethernet
XSCF shell	● Monitors the server. The status of the server can be checked. ● Server power can be controlled from a remote location. Server power can be turned on and off and the system can be rebooted from a remote location. ● Displays the server configuration. The internal configuration of the server can be checked.	S	S
XSCF Web function	Provides the same functions as the functions of the XSCF shells, but provides graphical displays for easier operation.	―	S
Mail report	Reports errors and failures by e-mail so that immediate measures can be taken.	―	S
SNMP trap report	Enables consolidated control for server administration in conjunction with SNMP manager.	―	S
Standard console	You can access to the OS console and/or OBP prompt.	S	S

S: Supported. -: Not supported.

Next: 1.4 XSCF Monitoring and Linkage to Other Functions

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1.4 XSCF Monitoring and Linkage to Other Functions

XSCF monitors the system, and log errors in case it happens. This section describes the error log and how it is handled by the XSCF functions.

How "Hardware error log" is handled by the XSCF functions

XSCF logs detected hardware related errors, and, in parallel, informs warning messages. This log called as "Hardware error log".
Figure 1-2 shows how an error logged by XSCF is simultaneously reported to users by each of the XSCF functions.

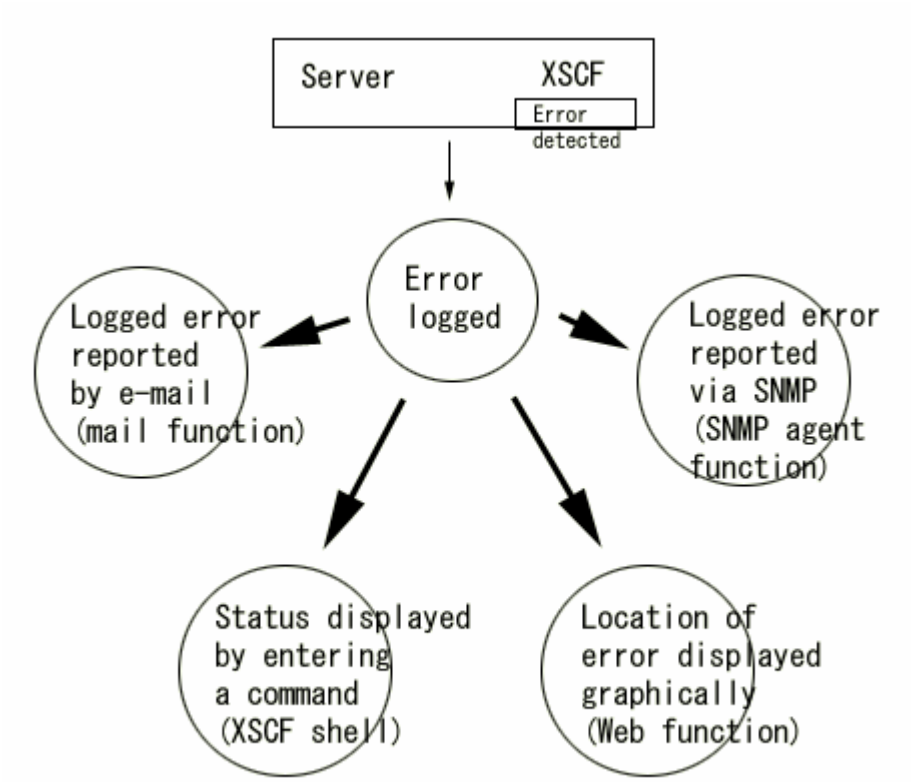
Server
XSCF
Error detected
Error logged
Logged error reported by e-mail (mail function)
Logged error reported via SNMP (SNMP agent function)
Status displayed by entering a command (XSCF shell)
Location of error displayed graphically (Web function)

Figure 1-2 Error message handling by function

How XSCF logs hardware errors and how the XSCF functions report errors are described below.

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Table 1-2 Functions related to "Hardware error log"

Type	Characteristics	XSCF function
E-mail	The XSCF mail function can immediately report happend error by sending e-mail to defined addresses of administrators.	XSCF mail function
SNMP Manager	Using a TRAP, the XSCF SNMP agent function can immediately report happened error to the administrators, located far from systems. — Time at which the error was trapped — Host name	XSCF SNMP agent function
XSCF shell	You can check the error log, information about status of system with using commands on XSCF shell, that you can access from terminal connected to XSCF.	XSCF shell
Remote panel	The XSCF Web function graphically displays the server status by specify host name of XSCF to a Web browser. — Error log — States of the LEDs on the operating panel	XSCF Web function
The following error log items are common to these functions: ● Time at which the error occurred (local time) ● Message ● Error code ● Faulty component		

Other XSCF logs and their linkage with the XSCF functions

In addition to "Hardware error log", XSCF also stores the following types of logs:

- Access log: Records logins to XSCF, authentication timeouts, and power-on/off operations on the remote panel.
- Power log: Records power-on/off operations and reset operations to the server.
- Event log: Records events, which is not related to failure and should be prioritized to "NOTIFICATION" priority.

Table 1-3 below shows reaction of XSCF against some typical events. This table shows you the types of logs XSCF will take, way to display the taken log and method to report it to administrators.

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Table 1-3 Types of logs and related functions for some typical events

Event	Log type	XSCF functions associated with the log			
		XSCF shell	XSCF Web function	SNMP agent function	Mail function
XSCF logins	a, ev	S	N	N	N
Authentication failures (5 or more attempts within 3 minutes)	a, ev	S	N	N*1	S
Power-on/off or reset operations on the remote panel	a, ev, p	S	S (only P)	S*2	N
Power-on/off, reset, or mode switching operations on the operating panel	ev, p	S	S (only P)		N
Power-on/off operations by command of XSCF or from an RCI device or the OS	p	S	S		N
Events, such as a power failure, change in status, configuration change, and reporting the result of log analysis	ev	S	N	N*3	N
Hardware related warnings or error notifications	err	S	S	S	S

a: access log, ev: event log, p: power log, err: Hardware error log

S: This event can be displayed or reported by this function.

N: This event is not displayed or reported by this function.

*1: Only failure of an access made with an invalid community name is informed by TRAP.

*2: You can monitor the server status, power-on/off, mode switching, and reset operations, as MIB information.

*3: Changes in server status and configuration changes are informed by TRAP.

For information about how and when to log events, see the following chapters:

- Referencing logs with XSCF shells: "Chapter 3 Connecting XSCF or Server", "Chapter6 How to Use the XSCF Command Shell", and "Appendix B XSCF Log Information"
- XSCF Web function: "Chapter4 How to Use the Remote Panels" and "Chapter5 How to Use the XSCF Web Function"
- MIB list: "Appendix C XSCF MIB "

Each XSCF function needs set up in prior to its start of using. See "Chapter2 Setting Up XSCF".

Next: 1.5 Time synchronization

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1.5 Time synchronization

XSCF uses the same clock hardware as OS. Therefore, the same time as OS is displayed on the screen in XSCF shell terminal, "Standard console", and the XSCF Web function.

However, when you rewind the clock of OS, this will interfere the logging mechanism of following logs. The order of logged events might be different from original order, or a part of events could even be disappear when you look the following logs on Machine Administration function.

- error logs
- power logs
- event logs
- access logs

Next: "Chapter2 Setting Up XSCF"

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Chapter 2 Setting Up XSCF

This chapter explains how to set up XSCF.

This chapter has the following contents.

Contents:

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2.2.1 Network Configuration 2-4
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2.1 XSCF Setup Flow

Each XSCF function needs set up in prior to start using of them.
Make the following settings:

- Network Configuration (required)
- User Account Administration (required)
- Console Administration (required)
- XSCF Web Administration (optional)
- SNMP Administration (optional)
- Mail Administration (optional)
- REMCS Environment Setting via XSCF (optional)
- SSH Administration (optional)

To make the settings, use the Machine Administration Menu, which runs on Solaris OS.

1. Issue the below command and start up the Machine Administration Menu.

```
#/usr/sbin/FJSVmadm/madmin
```

For information about the Machine Administration Menu, see the *Enhanced Support Facility User's Guide for Machine Administration* for ESF.
The setup flow is outlined below. For details of how to specify the settings, see the sections following this section.

2. First, open the Machine Administration Menu on the OS.

```
Machine Administration Menu – XSCF administration Menu –
- Network Configuration
- User Account Administration
- Console Administration
- XSCF Web Administration
- SNMP Administration
- Mail Administration
```

(The windows presented here are samples.)

3. Specify the Network Configuration. (Required)

```
- IP address configuration
- Subnet mask configuration
- Gateway address configration
- XSCF Host name configuration
```

4. Register a user account. (Required)

```
Add or delete an XSCF account.
ID:  xxxxxxxxx
Password:  xxxxxxxxx
```

5. Specify the Console Configuration. (Required)

```
- Select Standard console
- Access control of console port
- Auto-disconnect administration
```


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6. Configure the XSCF Web. (Optional, but recommended, because you can more easily manage the system from the remote Web browser.)

   - Enable/Disable XSCF Web
   - Select locale
   - Appearance of Web page
   - Access control

7. Set up the SNMP configuration. (Optional, but recommended if you have SNMP manager. You can achieve consolidated management of system with using SNMP manager.)

   - Port Setting
   - Management Information
     - sysContac
     - sysName
     - sysLocation
   - Register community
   - Delete community

8. Set up the Mail reporting function. (Optional, but recommended because you can receive a mail from system in case of error.)

   - Mailer Setting
   - Server Setting
   - Mail Destination Address Setting
   - From: Header Setting

9. Set up the REMCS environment setting via XSCF. (Optional, but recommended because you can send a mail to REMCS center in case of system down.)

   Machine Administration Menu – REMCS agent Menu –
   - REMCS Environment Setting via XSCF option -
   - Enable/Disable REMCS via XSCF
   - Server Setting

10. Exit the Machine Administration Menu. Then set up the SSH function on the comman line. (Optional, but recommended because you have a high level of security on your console.)

Information
Those window images are samples. It differs from an actual screen.

Next: 2.2 Specifying the XSCF Settings

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2.2 Specifying the XSCF Settings

This section describes in detail the XSCF settings to be specified.

The XSCF setting is done by the Machine Administration Menu. You must have root privilege to use this menu.

2.2.1 Network configuration

Specify the network environments of SCF-LAN. Network configuration must be made.

The following table lists the settings and their functions.

Network Configuration User Account Administration Console Administration XSCF Web Administration SNMP Administration Mail Administration REMCS Administration SSH Administration

Table 2-1 XSCF Network configuration

Item	Description	Remarks
IP Address	Specify the IP address.	A console of the XSCF shell and a standard console are disconnected immediately after the setting. Please login again and continue the setting.
Subnet Mask	Specify the Subnet mask.	
Gateway Address	Specify the Default gateway.	
XSCF Host Name	Specify the Name Sever.	Note: The character which can be specified is Alphanumeric character (a-z,A-Z,0-9),hyphen (-) and period (.).
Name Server	Specify the Name server. Up to two Name servers can be specified.	No default setting has been specified. Note: When you disable the Name server, you should change the following parameters to IP address: ● SMTP server ● POP server For the settings, see the sections of “Mail Administration” and “REMCS Environment Setting via XSCF”.

Network configuration menu operation

In the beginning, set up "Network Configuration" in "XSCF Administration" menu of the Machine Administration Menu.

Examples:

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```
eXtended System Control Facility(XSCF) Administration
(XSCF Administration, hereafter)

1. Network Configuration
2. User Account Administration
3. Console Administration
4. XSCF Web Administration
5. SNMP Administration
6. Mail Administration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-6,q,b,t,h):1
```

IP Address

Choose "IP Address" in "Network Configuration" menu by number.

Examples:

```
Network Configuration

1. IP Address:0.0.0.0
2. Subnet Mask:0.0.0.0
3. Gateway Address:0.0.0.0
4. XSCF Host Name:
5. Name Server1:
6. Name Server2:
u. Save Configuration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-4,u,q,b,t,h):1                                    [Return]
Enter IP Address:192.168.1.10
```

Subnet Mask

Choose "Subnet Mask" in "Network Configuration" menu by number.

Examples:

```
Network Configuration

1. IP Address:192.168.1.10
2. Subnet Mask:0.0.0.0
3. Gateway Address:0.0.0.0
4. XSCF Host Name:
5. Name Server1:
6. Name Server2:
u. Save Configuration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-4,u,q,b,t,h):2                                    [Return]
Enter Subnet Mask:255.255.255.0
```

Gateway Address

Choose "Gateway Address" in "Network Configuration" menu by number.

Examples:

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```
Network Configuration

1. IP Address:192.168.1.10
2. Subnet Mask:255.255.255.0
3. Gateway Address:0.0.0.0
4. XSCF Host Name:
5. Name Server1:
6. Name Server2:
u. Save Configuration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-4,u,q,b,t,h):3                                        [Return]
Enter Gateway Address:192.168.1.1
```

XSCF Host Name

Next, choose "Host Name Configuration" in "Network Configuration" menu by number.

Examples:

```
Network Configuration

1. IP Address:192.168.1.10
2. Subnet Mask:255.255.255.0
3. Gateway Address:192.168.1.1
4. XSCF Host Name:
5. Name Server1:
6. Name Server2:
u. Save Configuration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-4,u,q,b,t,h):4                                        [Return]
Enter New Host Name with alphanumeric characters (a-z, A-Z, 0-9), hyphen(-) and
  period(.)
This needs to enter FQDN.
Input:example.com
```

Name Server

Next, choose "Name Server1" in "Network Configuration" menu by number.

Examples:

```
Network Configuration

1. IP Address:192.168.1.10
2. Subnet Mask:255.255.255.0
3. Gateway Address:192.168.1.1
4. XSCF Host Name:example.com
5. Name Server1:
6. Name Server2:
u. Save Configuration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-4,u,q,b,t,h):5                                        [Return]
Enter the Address of Name Server 1:192.168.1.1
```


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[Next:]

```
Network Configuration

1. IP Address:192.168.1.10
2. Subnet Mask:255.255.255.0
3. Gateway Address:192.168.1.1
4. XSCF Host Name:example.com
5. Name Server1:192.168.1.1
6. Name Server2:
u. Save configuration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-4,u,q,b,t,h):u                                    [Return]
Are you sure? (y,n):y                                       [Return]
Setting has completed.
Hit return key
```

Setting on the command line

The "Network Configuration" can also be set by using the scfconsole (1M) command of the Machine Administration function. Use the scfstat (1M) command to display the configuration information. When you set up the "Network Configuration" on the command line, please perform the scfreset (1M) command to reflect the setting.

For details of these three commands (*) of the Machine Administration function, see the command reference in the *Enhanced Support Facility User's Guide for Machine Administration* for the ESF.

* The commands are at ESF2.5.1 or later.

Information

The layout and the content of the menu show a sample. It might be changed because of the function improvement.

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2.2.2 User account administration

Specify a user account for the XSCF shell. The User account administration must be made. The following table lists the settings and their functions.

Network Configuration User Account Administration Console Administration XSCF Web Administration SNMP Administration Mail Administration REMCS Administration SSH Administration

Table 2-2 XSCF User account administration

Item	Description	Remarks
Account setting	Specify an XSCF user account to be added or deleted. Specify a group ID from root/others. The following are the account levels: ● root This account level permits the use of all shell commands. ● others This account level permits the use of only some shell commands. For more information, see "Chapter6 How to Use the XSCF Command Shell".	Up to 8 users, including root, can be registered. Specify an account name of up to 8 characters.
Update password	Specify a password for the XSCF user account.	Specify a password of 8 to 16 characters.

User account setting menu operation

In the beginning, select "User Account Administration" from "XSCF Administration" of the Machine Administration Menu by its number.

Examples:

```
XSCF Administration

1. Network Configuration
2. User Account Administration
3. Console Administration
4. XSCF Web Administration
5. SNMP Administration
6. Mail Administration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-6,q,b,t,h):2
```

Account setting

To add user account, choose "Add User" in "User Account Administration".

Examples:

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```
User Account Administration

1. Show User List
2. Add User
3. Delete User
4. Update Password

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-4,q,b,t,h):2
```

[Next:]

```
Add User

Users can be registered up to 8 accounts.
<user>          <group>
-------------------------------------
xxxx            root
yyyyy           others
zzzzz           others
a. Add User

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(a,q,b,t,h):a
```

[Next:]

```
Add user
   : Some lines omitted
------------------------------------------------------------------------
Select.(a,q,b,t,h):a                                        [Return]
Enter User Name:abc1234
```

[Next:]

```
Select User Group

1. root
2. others

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Choose the group of the user <username> (1-2,q,b,t,h):1     [Return]
Do you add a user? (y,n):y                                  [Return]
User was added. This user needs password to login.
Hit return key
```

[Next:]

```
Add User

Users can be registered up to 8 accounts.
<user>          <group>
-------------------------------------
xxxx            root
yyyyy           others
zzzzz           others
abc1234         root
a. Add user

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select (a,q,b,t,h):a
```

To add other user account, please repeat the same procedure in "Add User" menu.

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When the maximum number of account has already been registered, you will see following screens:

```
Add User

Users can be registered up to 8 accounts.
<user>          <group>
-------------------------------------
xxxx            root
yyyyy           others
zzzzz           others
abc1234         root
zzzz5           others
zzzz6           others
zzzz7           others
zzzz8           others

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------------
Number of the accounts will exceeds the limit(8).
You need to delete users to add new account.
Hit return key
```

To Delete user account, choose "Delete User" in "User Account Administration".
Examples:

```
Delete User

<user>          <group>
---------------------------------------
1. xxxx         root
2. yyyyy        others
3. zzzzz        others
4. abc1234      others

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------------
Select user.(1-4,q,b,t,h):2                                    [Return]
Do you really want to delete this user ? (y,n):y               [Return]
The user was deleted. Hit return key
```

[Next:]

```
Delete User

<user>          <group>
---------------------------------------
1. xxxx         root
2. zzzzz        others
3. abc1234      others

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------------
Select user.(1-3,q,b,t,h):
```

When you press the return key, then the screen is updated as above.
To delete other account, repeate the same procedure.
When no account is registered, you will see following screens:

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```
Delete User

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------------
There is no registered user.
You cannot delete.
Hit return key
```

Menu point will return to "User Account Administration" by pressing return.

Update Password

To change password, choose "Update Password" from "User Account Administration" menu.
Examples:

```
Update Password

<user>          <group>
----------------------------------------
1. xxxx         root
2. zzzzz        others
3. abc1234      others

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------------
Select user.(1,q,b,t,h):2                                   [Return]
Do you really want to update the password? (y,n):y          [Return]
New password:xxxxxxxxxx                                     [Return]
Re-enter new password:xxxxxxxxxx                            [Return]
Password was updated.
Hit return key
```

When you press the return key, then it goes back to "Update Password" menu.
To update setting of other account, repeat same procedure.

Setting on the command line

The "User Account Administration" can also be set by using the scfuser (1M) command of the Machine Administration function. Use the scfstat (1M) command to display the configuration information. When you set up the "User Account Administration" on the command line, please perform the scfreset (1M) command to reflect the setting.
For details of these three commands (*) of the Machine Administration function, see the command reference in the *Enhanced Support Facility User's Guide for Machine Administration* for the ESF.

* The commands are at ESF2.5.1 or later.

Information
The layout and the content of the menu show a sample. It might be changed because of the function improvement.

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2.2.3 Console Administration

Specify the console of XSCF. Console Administration must be made.
The following table lists the settings and their functions.

Network Configuration User Account Administration Console Administration XSCF Web Administration SNMP Administration Mail Administration REMCS Administration SSH Administration

Table 2-3 XSCF Console Administration

Item	Description	Remarks
Select Standard Console	Select whether to use a standard console via the serial port (tty-a) or the SCF-LAN port. When you use the SSH function, select the SCF-LAN port. in this settings. and set up the "SSH settings" on the Machine Administration function's command. For the SSH settings, see the "SSH Administration".	The default is the serial port. If you set the SCF-LAN port, the Standard console port which read-write OS console in the XSCF telent ports or SSH ports is enabled automatically.
Access Control of Read-only Console	Specify whether to enable or disable the Read-only console port in the XSCF telnet ports or SSH ports. When you use the SSH function, enable this settings. and set up the "SSH settings".	The port is disabled by default. Caution: When you use the telnet port("8011" port and "8013" port), this port can be used by up to three users per server. But the "8011" port (2 connection can be used.) is used for only the cluster control software when you use the cluster control software. The "8013" port is used for only the remote console port. When you use the SSH port, this port can be used by up to two users per server.
Access Control of XSCF remote console	Specify whether to enable or disable the XSCF Shell port in the XSCF telnet ports or SSH ports. When you use the SSH function, enable this settings. and set up the "SSH settings".	The port is disabled by default.
Auto-disconnect administration of XSCF remote console	Specify minutes of inactivity before automatic log out. This function is valid on XSCF shell and XSCF Web function. Also specify whether automatic forced logout of XSCF shell is to be enabled or disabled.	The default timeout is 10 minutes. A timeout from 1 to 255 (minutes) can be specified. Note: If you set 0 miniutes, the automatic logout of XSCF Shell is to be disabled. But in this case, the automatic logout of XSCF Web function is enable as 10 minutes.

Note:
We strongly recommend that you should set the input-output destination of the OS console to the tty-a (Especially, when you use the graphic card). For more detail about changing the console to "tty-a", see "Chapter3 Connecting XSCF or Server".

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Console Administration menu operation

In the beginning, set up "Console Administration" in "XSCF Administration" menu of the Machine Administration Menu.

Examples:

```
XSCF Administration

1. Network Configuration
2. User Account Administration
3. Console Administration
4. XSCF Web Administration
5. SNMP Administration
6. Mail Administration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-6,q,b,t,h):3
```

Select Standard Console

Choose "Select Standard Console" in "Console Administration" menu by number.

Examples:

```
Console Administration

1. Show Current Configuration
2. Select Standard Console
3. Access Control of Read-only Console
4. Access Control of XSCF remote control
5. Auto-disconnect Administration of XSCF remote control

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-5,q,b,t,h):2
```

[Next:]

```
Select Standard Console

Current Standard Console: Serial port
1. Serial port
2. LAN port

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select standard console.(1-2,q,b,t,h):2                    [Return]
Warning: If the XSCF Basic Network Configuration is improper, Standard Console
can not be used at all any more.
Are you sure? (y,n):y                                      [Return]
Setting has completed.
Hit return key
```

Access Control of Read-only Console

Next, configure the read-only OS console port in the telnet ports or SSH ports of SCF-LAN by selecting "Access Control of Read-only Console" in "Console Administration".

Examples:

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```
Access Control of Read-only Console

Current Configuration: disable
1. Enable
2. Disable

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-2,q,b,t,h):1                                          [Return]
Are you sure? (y,n):y                                           [Return]
Setting has completed.
Hit return key
```

Access Control of XSCF remote control

Next, configure the XSCF Shell port in the telnet ports or SSH ports of SCF-LAN by selecting "Access Control of XSCF remote console" in "Console Administration".

Examples:

```
Access Control of XSCF remote control

Current Configuration: disable
1. Enable
2. Disable

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-2,q,b,t,h):1                                          [Return]
Are you sure? (y,n):y                                           [Return]
Setting has completed.
Hit return key
```

Auto-disconnect Administration of XSCF remote control

Next, set up the Automatic logout by choosing "Auto-disconnect Administration of XSCF remote control" in "Console Configuration" by number.

Examples:

```
Auto-disconnect Administration of XSCF remote control

Current configuration: 10

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Enter minutes to disconnect inactive user (0,1-255,q,b,t,h):0   [Return]
Auto-disconnect will be disabled.
Are you sure? (y,n):y                                           [Return]
Setting has completed.
Hit return key
```

Setting on the command line

The "Console Administration" can also be set by using the scfconsole (1M) command of the Machine Administration function. Use the scfstat (1M) command to display the configuration information. When you set up the "Console Administration" on the command line, please perform the scfreset (1M) command to reflect the setting.

For details of these three commands (*) of the Machine Administration function, see the command reference in the *Enhanced Support Facility User's Guide for Machine Administration* for the ESF.

* The commands are at ESF2.5.1 or later.

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Information

The layout and the content of the menu show a sample. It might be changed because of the function improvement.

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2.2.4 XSCF Web Administration

Specify the XSCF Web Administration for the XSCF Web function and specify whether access to XSCF using the http protocol is enabled or disabled. The XSCF Web Administration are optional.
The following table lists the settings and their functions.

Network Configuration User Account Administration Console Administration XSCF Web Administration SNMP Administration Mail Administration REMCS Administration SSH Administration

Table 2-4 XSCF Web Administration

Item	Description	Remarks
Enable/Disable XSCF Web	Specify whether to enable or disable http server for XSCF Web function.	XSCF Web function is disabled by default. To invalidate the operation to the swithes on remote panel, choose "read only mode".
Select Locale	Specify the locale for Web pages. Specify either of the following locales: ● C (English) ● ja (Japanese)	The default setting is C.
Appearance of Web Page	Specify whether to display Web pages graphically or in text.	Web pages are displayed in text by default.
Access Control	Specify the IP address of a host from which access is allowed. Specify up to 16 hosts .	No default setting has been specified. Note: In this case, access from any hosts is permitted.

XSCF Web Administration menu operation

In the beginning, select "Enable/Disable XSCF Web" from "XSCF Administration" menu of the Machine Administration Menu by its number.

Examples

```
XSCF Administration

1. Network Configuration
2. User Account Administration
3. Console Administration
4. XSCF Web Administration
5. SNMP Administration
6. Mail Administration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-6,q,b,t,h):4
```

Enable/Disable XSCF Web

Next, configure "Enable/Disable XSCF Web" in "XSCF Web Administration" menu.

Examples:

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```
XSCF Web Administration

1. Show Current Configuration
2. Enable/Disable XSCF Web
3. Select Locale
4. Appearance of Web Page
5. Access Control

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------------
Select.(1-5,q,b,t,h):2
```

[Next:]

```
Enable/Disable XSCF Web

Current Configuration:disable
1. Enable with read/write mode
2. Enable with read only mode
3. Disable

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------------
Select.(1-3,q,b,t,h):1
```

[Next:]

```
Enable/Disable XSCF Web

Current Configuration:enable with read/write mode
1. Enable with read/write mode
2. Enable with read only mode
3. Disable

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------------
Select.(1-3,q,b,t,h):1                                        [Return]
Enable with read/write mode.
Are you sure? (y,n):y                                         [Return]
Setting has completed.
Hit return key
```

Select Locale

Next, configure "Select Locale" in "XSCF Web Administration" menu.

Examples:

```
Select Locale

Current Locale: C(english)
1. C(english)
2. ja(japanese)

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------------
Select.(1-2,q,b,t,h):2
```


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[Next:]

```
Select Locale

Current Locale: ja(japanese)
1. C(english)
2. ja(japanese)

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-2,q,b,t,h):2                                          [Return]
Are you sure? (y,n):y                                           [Return]
Setting has completed.
Hit return key
```

Appearance of Web Page

Next, choose "Appearance of Web Page" in "XSCF Web Administration" menu.

Examples:

```
Appearance of Web Page

Current Appearance: Text only
1. Text only
2. Text and Images

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-2,q,b,t,h):2
```

[Next:]

```
Appearance of Web Page

Current Appearance: Text and Images
1. Text only
2. Text and Images

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-2,q,b,t,h):2                                          [Return]
Are you sure? ?(y,n):y                                          [Return]
Setting has completed.
Hit return key
```

Access Control

Next, set up "Access Control" in "XSCF Web Administration" menu.

Examples:

```
Access Control

a. Add an Access-allowed Host
u. Save Configuration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(a,u,q,b,t,h):a                                          [Return]
Enter the address of host 1
To clear information, just type in ‘return’ key.
Input:192.168.10.1
```


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[Next:]

```
Access Control

1. Host 1:192.168.10.1
a. Add an Access-allowed Host
u. Save Configuration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(a,u,q,b,t,h):u                                          [Return]
Are you sure? (y,n):y                                           [Return]
Update was completed.
Hit return key
```

When you press the return key, then it goes back to "Add an Access-allowed Host" menu.
To specify additional host, repeat same procedure.
You can change the configuration of access-allowed host as follows:

```
Access Control

1. Host1:192.168.10.1
2. Host2:192.168.10.2
3. Host3:192.168.10.3
a. Add an Access-allowed Host
u. Save Configuration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-3,a,u,q,b,t,h):3                                      [Return]
Enter the address of host 3
To clear information, just type in ‘return’ key.
Input:
```

Press the return key, here, then the screen is updated.

[Next:]

```
Access Control

1. Host1:192.168.10.1
2. Host2:192.168.10.2
a. Add an Access-allowed Host
u. Save Configuration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(a,u,q,b,t,h):u                                          [Return]
Access control list will be updated.
Are you sure?(y,n):y                                            [Return]
Update was completed.
Hit return key
```

Setting on the command line

The "XSCF Web Administration" can also be set by using the scfhttp (1M) command of the Machine Administration function. Use the scfstat (1M) command to display the configuration information. When you set up the "XSCF Web Administration" on the command line, please perform the scfreset (1M) command to reflect the setting.

For details of these three commands (*) of the Machine Administration function, see the command reference in the *Enhanced Support Facility User’s Guide for Machine Administration* for the ESF.

* The commands are at ESF2.5.1 or later.

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Information

The layout and the content of the menu show a sample. It might be changed because of the function improvement.

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2.2.5 SNMP Administration

To use the XSCF SNMP agent function, specify settings related to the SNMP protocol. These settings are optional.
The following table lists the settings and their functions.

Network Configuration User Account Administration Console Administration XSCF Web Administration SNMP Administration Mail Administration REMCS Administration SSH Administration

Table 2-5 XSCF SNMP Administration

Item		Description	Remarks
Enable/Disable SNMP		Specify whether to enable or disable the SNMP agent function.	The SNMP agent function is disabled by default. If you enable it, be sure to specify at least one community.
Manage-ment Infor-mation	SysContact	Specify the name of the administrator. Use up to 15 ASCII characters.	No default setting has been specified.
	SysName	Specify the name of the system. Use up to 15 ASCII characters.	No default setting has been specified.
	SysLocation	Specify the location of the system. Use up to 15 ASCII characters.	No default setting has been specified.
Register community (Up to two communities)		Specify SNMP communities. One or two communities can be specified. Specify the following properties: ● Community name A community name beginning with a space is invalid. ● Trap request Specify whether to allow sending TRAP. ● IP address Specify one IP address for the SNMP manager.	Use up to 11 characters to specify a community name. No default IP address has been specified. Note: Specifying 0.0.0.0 as the IP address allows any SNMP manager in this community to access the XSCF. Note, however, that specifying 0.0.0.0 does not allow traps to be issued.
Delete community		Delete SNMP communities.	

SNMP Administration menu operation

In the beginning, choose "SNMP Administration" in "XSCF Administration" menu of the Machine Administration Menu.

Examples

```
XSCF Administration

1. Network Configuration
2. User Account Administration
3. Console Configuration
4. XSCF Web Administration
5. SNMP Administration
6. Mail Administration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-6,q,b,t,h):5
```


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Enable/Disable SNMP

Next, select "Enable/Disable SNMP" in "SNMP Administration" menu.

Examples:

```
SNMP Administration

1. Show Current Configuration
2. Enable/Disable SNMP
3. Management Information
4. Register Community
5. Delete Community

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-5,q,b,t,h):2
```

[Next:]

```
Enable/Disable SNMP

Current Configuration: disable
1. Enable SNMP Agent
2. Disable SNMP Agent

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-2,q,b,t,h):1                                          [Return]
Are you sure? (y,n):y                                           [Return]
Setting has completed.
Hit return key
```

SysContact/ SysName/ SysLocation

Next, choose "Management Information" in "SNMP Administration" menu.

Examples:

```
Management Information

1. SysContact:name
2. SysName:
3. SysLocation:4-3F ABC
u. Setup Configuration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-3,u,q,b,t,h):2                                        [Return]
Enter SysName
To clear information, just type in ‘return’ key.
Input:Patty SCF
```

[Next:]

```
Management Information

1. SysContact:name
2. SysName:Patty SCF
3. SysLocation:4-3F ABC
u. Setup Configuration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-3,u,q,b,t,h):u                                        [Return]
Are you sure? (y,n):y                                           [Return]
Setting has completed.
Hit return key
```


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Register Community

Next, select "Register Community" in "SNMP Administration" menu.

Examples:

```
Register Community

a. Add New Community

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------------
Select.(a,q,b,t,h):a                                          [Return]
Enter community name:public
```

[Next:]

```
Administration of Community "public"

1. SNMP Manager Address:
2. SNMP Trap Notification: disable
u. Save Configuration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------------
Select.(1-3,u,q,b,t,h):1                                      [Return]
Enter SNMP Manager address:192.168.10.123
```

[Next:]

```
Administration of Community "public"

1. SNMP Manager Address:192.168.10.123
2. SNMP Trap Notification: disable
u. Save Configuration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------------
Select.(1-3,u,q,b,t,h):2
```

[Next:]

```
SNMP Trap Notification

1. Enable
2. Disable

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------------
Select.(1-2,u,q,b,t,h):1
```

[Next:]

```
Administration of Community "public"

1. SNMP Manager Address:192.168.10.123
2. SNMP Trap Notification: enable
u. Save Configuration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------------
Select.(1-3,u,q,b,t,h):u                                      [Return]
Are you sure? (y,n):y                                         [Return]
Setting has completed.
Hit return key
```

Please follow the instructions from menu in order to complete administration of community "public". Then, you can add second community with using "Register Community" menu.

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Examples:

```
Register Community

1. public
a. Add New Community

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1,q,b,t,h):a
```

Configure second community "private" as well as the above-mentioned.

Delete Community

Select "Delete Community" in "SNMP Administration" menu.
The example of executing the menu of "Delete Community" as follows.

```
Delete Community

1. public
2. private

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select community (1-2,q,b,t,h):1
```

[Next:]

```
Delete Community

1. private
a. Add New Community

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Are you sure? (y,n):y                                        [Return]
A community was deleted.
Hit return key
```

Setting on the command line

The "SNMP Administration" can also be set by using the scfsnmp (1M) command of the Machine Administration function. Use the scfstat (1M) command to display the configuration information. When you set up the "SNMP Administration" on the command line, please perform the scfreset (1M) command to reflect the setting.
For details of these three commands (*) of the Machine Administration function, see the command reference in the *Enhanced Support Facility User's Guide for Machine Administration* for the ESF.

* The commands are at ESF2.5.1 or later.

Information
The layout and the content of the menu show a sample. It might be changed because of the function improvement.

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2.2.6 Mail Administration

Specify the XSCF Mail Administration. This is optional.
The following table lists the settings and their functions.

Network Configuration User Account Administration Console Administration XSCF Web Administration SNMP Administration Mail Administration REMCS Administration SSH Administration

Table 2-6 XSCF Mail Administration

Item	Description	Remarks
Mailer setting	Specify whether to enable or disable the mailer.	The mailer is disabled by default.
Server setting	Specify the host name or IP address of the SMTP server. Up to two SMTP servers can be specified. In addition, you can enable or disable the POP authentication at the same time. When you enable the POP authentication, specify the host name or IP address of the POP authentication server, user ID, password, the POP waiting time.	No default setting has been specified.
Mail destination address setting	Specify the address of a system administrator to whom mail reports are to be delivered. Specify multiple addresses by separating them with a comma (,). The total number of characters cannot exceed 255.	This setting cannot be omitted. No default setting has been specified. Note: A mail address is "(64 characters or less) @ (64 characters or less)". Eight addresses or less can be specified. Check the setting of your cell phone if you receive the email by the cell phone which sets the address restrictions.
"From:" header setting	Specify the mail address to be coded in the "From:" header. Use up to 47 ASCII characters. This address will be used as destination of mail delivery error notification when SMTP server detects the error.	This setting cannot be omitted. Example: root@example.com Note: In case of mail delivery error, such as SMTP server cannot find out the destination address of mail, this delivery failure will be informed by mail. And, destination of this delivery failure report will be the address specified in "From:" field. Therefore, specify address, which surely exists and can receive mail. Do NOT specify XSCF, because XSCF can send a mail, but cannot receive.
Test Mail	You can conduct a mailing test.	

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Mailing test

After making the settings above, you can conduct a mailing test.
After sending a test e-mail message, confirm that the test message is delivered to the all of the destination addresses.

Mail Administration menu operation

In the beginning, choose "Mai Administration" in "XSCF Administration" menu of the Machine Administration Menu.

Examples

```
XSCF Administration

1. Network Configuration
2. User Account Administration
3. Console Administration
4. XSCF Web Administration
5. SNMP Administration
6. Mail Administration

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-6,q,b,t,h):6
```

Mailer setting

Next, choose "Details Setup of the Mail" in "Mail Administration" menu. And enable the "mail report function".

Examples:

```
Mail Administration

1. Show Current Configuration
2. Details Setup of the Mail
3. Send Test Mail

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-3,q,b,t,h):2
```

[Next:]

```
Details Setup of the Mail

Mail Report: disable
1. Enable Mail Report (and Setup)
2. Disable Mail Report

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-2,q,b,t,h):1
```

Please follow the instruction of the next screen until the setting is completed.

Server setting/ Mail destination address setting/ "From:" header setting

Next, set the mail address and server .

Examples:

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```
Enable Mail Report (and Setup)

 1. To:
 2. From:
 3. SMTP Server1:
 4. SMTP Server2:
 u. Save Configuration

q:Quit b:Back to previous menu   t:Go to topmenu   h:Help
------------------------------------------------------------------------
Select.(1-4,u,q,b,t,h):1                                        [Return]
The mail address set by the Hardware Monitoring Information menu cannot be used
by XSCF. You cannot copy it.
Enter Destination Mail Address :user@example.com
```

[Next:]

```
Enable Mail Report (and setup)

1. To:user@example.com
2. From:
3. SMTP server 1:
4. SMTP server 2:
u. Setup execution.

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-4,u,q,b,t,h):2                                        [Return]
Enter Mail Address assigned to "From:" field :admin@example.com
```

[Next:]

```
Enable Mail Report (and setup)

1. To:user@example.com
2. From:admin@example.com
3. SMTP server 1:
4. SMTP server 2:
u. Setup execution.

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-4,u,q,b,t,h):3                                        [Return]
Do you really want to enable POP before SMTP? (y,n)y            [Return]
Enter the Host Name (or Address) of SMTP server 1
To clear information, just type in 'return' key.
Input:smtp-server                                               [Return]
Enter the Host Name (or Address) of POP server
To discontinue setting of SMTP server, just type in 'return' key.
Input:smtp-server                                               [Return]
Enter the User Name of POP server
To discontinue setting of SMTP server, just type in 'return' key.
Input:popy                                                      [Return]
Enter the Password of POP server (You can make password empty)
Input:xxxxxxxxxx                                                [Return]
Re-input:xxxxxxxxxx                                             [Return]
Enter the POP Waiting time(500(ms)-127500(ms))
To set default time(1000(ms)), just type in 'return' key.
Input:                                                          [Return]
```


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[Next:]

```
Enable Mail Report (and setup)

1. To:user@example.com
2. From:admin@example.com
3. SMTP server 1:popy
   POP server1:smtp-server
   POP User1:popy
   POP Waiting time1(ms):1000
4. SMTP server 2:
u. Setup execution.

q:Quit b:Back to previous menu t:Go to topmenu h:Help
------------------------------------------------------------------------
Select.(1-4,u,q,b,t,h):u                                        [Return]
Are you sure? (y,n):y
Setting has completed.
XSCF will send test mail with new configuration.
Hit return key                                                  [Return]
Test mail sending was requested to XSCF. Please check reception of the mail.
Hit return key
```

Mail address, specify multiple addresses seperated by a comma (,). The total number of characters cannot exceed 255.

Note:

Select "Show Current Configuration" in "Mail Administration" menu and check whether to have completed the Mail report from XSCF normally. If the e-mail is not received, the mail is sent to the destination for undelivered mail or the error logs is recorded, so check them.

Test Mail

Next, select "Send Test Mail" in "Mail Administration" menu in order to conduct a mailing test.

Examples:

```
Send Test Mail

XSCF will send test mail with following configuration.
To:user@example.com
From:admin@example.com
SMTP Server1:smtp-server POP Server1:smtp-server
SMTP Server2:

q:Quit b:Back to previous menu   t:Go to topmenu   h:Help
------------------------------------------------------------------------
Do you execute(y,n,q,b,t,h):y                                   [Return]
Test mail was sent.
Hit return key
```

Setting on the command line

The "Mail Administration" can also be set by using the scfmail (1M) command of the Machine Administration function. Use the scfstat (1M) command to display the configuration information. When you set up the "Mail Administration" on the command line, please perform the scfreset (1M) command to reflect the setting.

For details of these three commands (*) of the Machine Administration function, see the command reference in the *Enhanced Support Facility User's Guide for Machine Administration* for the ESF.

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* The commands are at ESF2.5.1 or later.

Information

The layout and the content of the menu show a sample. It might be changed because of the function improvement.

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Display current configuration

To check the current configuration in each setting of “XSCF Administration”, choose "Show Current Configuration" of each menu.

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2.2.7 REMCS Environment Setting via XSCF

Specify the REMCS Environment Setting via XSCF. This is optional.

For the settings of REMCS Environment Setting via XSCF, you need some settings on the "REMCS agent" option of the Machine Administration Menu before. For about the setting, see the *Enhanced Support Facility User's Guide for Machine Administration.*

The following table lists the settings and their functions.

Network Configuration User Account Administration Console Administration XSCF Web Administration SNMP Administration Mail Administration REMCS Administration SSH Administration

Table 2-7 REMCS Environment Setting via XSCF

Item	Description	Remarks
REMCS via XSCF setting	Specify whether to enable or disable the REMCS function via XSCF.	REMCS via XSCF is disabled by default.
Server setting	Specify the host name or IP address of the SMTP server. Up to two SMTP servers can be specified. In addition, you can enable or disable the POP authentication at the same time. When you enable the POP authentication, specify the host name or IP address of the POP authentication server, user ID, password, the POP waiting time.	No default setting has been specified.

Mailing test

After making the settings above, you can conduct a mailing test to the REMCS center. After then, the REMCS center makes a confirmation, mail is returned to the administrator.

After sending a test e-mail message, confirm that the test message is delivered to the administrator.

REMCS settings menu operation

In the beginning, choose "REMCS Environment Setting via XSCF" in "Remote Customer Support System (REMCS) Setup" menu of the Machine Administration Menu.

Examples

```
oshostname Remote Customer Support System (REMCS) Setup menu
Series name:PRIMEPWR#P##, Model name:PW0LBS111###
Check code:MH, Serial No:345678######

1. Registration
2. REMCS Environment Setting
3. REMCS Operation
4. Change Connection Type
5. Software Investigation Information Collection
6. REMCS Environment Setting via XSCF

q:Quit   b:Back to previous menu   t:Go to top menu   h:Help
------------------------------------------------------------------
Select one.(1-6,q,b,t,h):6
```


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REMCS via XSCF settings/ Server settings

Next, choose the option number of "Update" in "REMCS Environment Setting via XSCF" menu. And enable the "REMCS via XSCF". Then specify the server.

Examples:

```
oshostname REMCS Environment Setting via XSCF

*REMCS via XSCF                                 :Disabled
   An asterisk (*) indicates an indispensable item.

1. Update
2. Send Test Mail

q:Quit    b:Back to previous menu    t:Go to top menu    h:Help
------------------------------------------------------------------------------
Select one.(1-2,q,b,t,h):1                                          [Return]
*REMCS via XSCF                                 :Disabled
Do you want to change the settings? (y,n,q):y                       [Return]
REMCS via XSCF
0. Disable
1. Enable
Enter disable or enable.(0-1):1                                     [Return]
*SMTP Server1 name                              :smtp-server
Do you want to change the settings? (y,n,q):y                       [Return]
Enter new data.:smtp-server                                         [Return]
*SMTP Server1 name                              :smtp-server
User authentication of SMTP Server1     :POP before SMTP
Do you want to change the settings? (y,n,q):y                       [Return]
Authentication method for SMTP Server1
0. none
1. POP before SMTP
Enter the authentication method.(0-1):1                             [Return]
*POP Server name for SMTP Server1          :smtp-server
Do you want to change the settings? (y,n,q):y                       [Return]
Enter new data.:smtp-server                                         [Return]
*POP UserID for SMTP Server1                :popy
Do you want to change the settings? (y,n,q):y                       [Return]
Enter new data.:popy                                                [Return]
*POP Password for SMTP Server1              :********
Do you want to change the settings? (y,n,q):y                       [Return]
New password:xxxxxxxxxx                                             [Return]
Enter the new password again.
New password:xxxxxxxxxx                                             [Return]
  SMTP Server2 name                          :
Do you want to change the settings? (y,n,q):n
```


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[Next:]

```
Write Environment Setting to XSCF

*REMCS via XSCF                              :Enabled
*SMTP Server1 name                           :smtp-server
  User authentication of SMTP Server1        :POP before SMTP
*POP Server name for SMTP Server1            :smtp-server
*POP UserID for SMTP Server1                 :popy
*POP Password for SMTP Server1               :********
  SMTP Server2 name                          :
    An asterisk (*) indicates an indispensable item.


1. Write Environment Setting to XSCF
2. Update

------------------------------------------------------------------------
Select one.(1-2,q):1                                          [Return]
Environment Setting was written to XSCF.
Now sending test mail to REMCS center via XSCF.
Wait for a while.....
After the REMCS Center makes a confirmation, mail is returned to the administrator.
Press any key.
```

Information

The layout and the content of the menu show a sample. It might be changed because of the function improvement.

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2.2.8 SSH Administration

Specify the SSH function of XSCF. This is optional.
The following table lists the settings and their functions.

Network Configuration User Account Administration Console Administration XSCF Web Administration SNMP Administration Mail Administration REMCS Administration SSH Administration

Table 2-8 XSCF SSH Administration

Item	Description	Remarks
Host Key setting	Download the Host key to XSCF.	The temporary host key is set by default.
SSH setting	Specify whether to enable or disable the SSH function.	The SSH function is disabled by default.

Supporting SSH protocol

The XSCF supports both SSH1(:SSH Protocol Version 1) and SSH2(:SSH Protocol Version 2).
The following table lists the setting value of SSH in XSCF.

Table 2-9 XSCF SSH Setting value

Item	Description	Remarks
Server Key Regeneration Interval	3600 seconds	Used by SSH1.
Server Key Bits	768 bits	Used by SSH1.
Encryption Algorithms	“3des-cbc,blowfish-cbc”	
MAC Algorithms	“hmac-md5,hmac-sha1”	Used by SSH2.
Data Compression	Enabled	

Supporting SSH cliant

The XSCF supports the below SSH cliants.

- Solaris Secure Shell
- Open SSH
- PuTTY
- TTSSH (SSH plug-in for Tera Term Pro)

Host Key Settings

For doing the host authentication of XSCF in SSH protocol, it explains the method of generating a host key and downloading it to XSCF.

It is necessary to generate the host key beforehand in the workstation which installed Solaris Secure Shell or Open SSH. Generate SSH1 host key and SSH2 host key.
For information about installing or using Solaris Secure Shell and Open SSH, please refer to the manual of each product.

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- To generate the SSH1 host key in the workstation which installed Solaris Secure Shell or Open SSH, do the following:

```
# ssh-keygen -t rsa1
Generating public/private rsa1 key pair.
Enter file in which to save the key (/home/user/.ssh/identity): ssh1.key
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in ssh1.key.
Your public key has been saved in ssh1.key.pub.
The key fingerprint is:
90:37:16:e0:cb:67:13:68:61:dc:17:0f:7f:2c:57:b7 user@domain
```

The host key is generated without a passphrase.
The Privete key is downloaded to XSCF, and the public key is not downloaded.

- To generate the SSH2 host key in the workstation which installed Solaris Secure Shell or Open SSH, do the following:

```
# ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/home/user/.ssh/identity): ssh2.key
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in ssh2.key.
our public key has been saved in ssh2.key.pub.
The key fingerprint is:
2c:97:ab:7f:a9:be:5a:08:54:82:1f:cd:42:e5:64:2b user@domain
```

The host key is generated without a passphrase.
The Privete key is downloaded to XSCF, and the public key is not downloaded.

Next, it explains the method of using xscf_dl_sshdata command and downloading the generated host key to XSCF.

When you use the xscf_dl_sshdata command, you need to disable the SSH function of XSCF in the SSH Administration(The SSH function is disabled by default.).

- To download the host key generated by xscf_dl_sshdata command to XSCF, do the following: The file extension of the download host key is ".key".

```
# /opt/FJSVmadm/sbin/xscf_dl_sshdata -set1 ssh1.key -set2 ssh2.key
```

- To check the downloaded host key, do the following:

```
# /opt/FJSVmadm/sbin/xscf_dl_sshdata -status
TYPE   FILE                    SIZE          TIME
----- ------------------- ---------- ------------------------------
SSH1   ssh1.key                 1024byte      Fri Jun 20 09:00:00 JST 2003
SSH2   ssh2.key                 1536byte      Fri Jun 20 09:00:00 JST 2003
```

- To delete the downloaded host key, do the following:

```
# /opt/FJSVmadm/sbin/xscf_dl_sshdata -clr1
# /opt/FJSVmadm/sbin/xscf_dl_sshdata -clr2
```


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Note:

The host key disappears when the system board is replaced. When you replace the system board, please download the host key again. Even if a host key disappears, you can use the SSH function by using the temporary host key which is pre-configured key in XSCF.

But the temporary host key is the model common host key, so It cannot be said that it is secure. Therefore, when using the temporary host key, it limits only at the time of instaling server or replacing system board.

Usually, we recommend that you shoul download the generated host key by above process.

In addition, the fingerprint of the temporary host key is as below.

SSH1 fingerprint：7e:03:97:36:f0:63:63:54:11:78:48:11:ab:2f:70:9e
SSH2 fingerprint：8a:4b:26:91:8f:d7:31:c2:8f:20:8e:36:45:d6:70:dd

Note:

The following is a reference of the xscf_dl_sshdata command on the Machine Administration function.

NAME

xscf_dl_sshdata - download the key for SSH of XSCF

SYNOPSIS

```
/opt/FJSVmadm/sbin/xscf_dl_sshdata -set1 file
/opt/FJSVmadm/sbin/xscf_dl_sshdata -set2 file
/opt/FJSVmadm/sbin/xscf_dl_sshdata -set1 file -set2 file
/opt/FJSVmadm/sbin/xscf_dl_sshdata -clr1
/opt/FJSVmadm/sbin/xscf_dl_sshdata -clr2
/opt/FJSVmadm/sbin/xscf_dl_sshdata -status
```

DESCRIPTION

The xscf_dl_sshdata command controls the key for SSH of XSCF.
Registration of key, deletion of registration key, display of
registration key information.

OPERANDS

-set1

The key data for SSH(Version1) specified by "file" is registered to XSCF.
It is necessary to contain extension ".key" in the file name.
It is possible to specify this option simultaneously with the -set2 option.

-set2

The key data for SSH(Version2) specified by "file" is registered to XSCF.
It is necessary to contain extension ".key" in the file name.
It is possible to specify this option simultaneously with the -set1 option.

-clr1

The key data for SSH(Version1) registered in XSCF are deleted.
It is impossible to specify this option simultaneously with the -clr2 option.

-clr2

The key data for SSH(Version2) registered in XSCF are deleted.
It is impossible to specify this option simultaneously with the -clr1 option.

-status

Information of the key data for SSH registered in XSCF is displayed

EXAMPLES

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Download of the key data for SSH
/opt/FJSVhwr/sbin/xscf_dl_sshdata -set1 xxxxx.key -set2 yyyyy.key

Deletion of the key data for SSH(Version1)
/opt/FJSVhwr/sbin/xscf_dl_sshdata -clr1

Deletion of the key data for SSH(Version2)
/opt/FJSVhwr/sbin/xscf_dl_sshdata -clr2

Display of information on key data
/opt/FJSVhwr/sbin/xscf_dl_sshdata -status

TYPE	FILE	SIZE	TIME
SSH1	xxxxx.key	1000byte	Wed May 28 19:30:30 JST 2003
SSH2	yyyyy.key	500byte	Wed May 28 19:30:30 JST 2003

NOTE

Only the super user can execute this command.

The file name is within 15 characters which contain the extension.
The small letter or the number can be used for the file name.
It is necessary to contain extension ".key" in the key file name.

The size of the key file should be the following.
1 byte - 2048 bytes

When the key data are resigtered or deleted, it is necessary to invalidate all ports for SSH.

EXIT STATUS

0: Normal end.
>0: An error occurred.

SSH Settings

Need the several settings for using the SSH function in each functions, Standard console, Read-only console and XSCF shell.

In addition, you have to set whether to use telnet or SSH in each functions by command on the Machine Administration Menu.

The Explain of the Setting as follows.

- In “Console Administration” menu of the Machine Administration Menu, specify the following: (It is the same when using telnet.)
  - Specify “LAN port” in “Select Standard Console”.
  - Specify “Enable” in “Access Control of Read-only Console”.
  - Specify “Enable” in “Access Control of ”XSCF remote control”.

  For more information of settings, see the section “Console Administration”.

- In the Machine Administration function, set the SSH function by using xscf_setssh command.

When you want to use the SSH function by Standard console, Read-only console and XSCF

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shell in all, issue the following command.

```
# /opt/FJSVmadm/sbin/xscf_setssh RW enable RO enable SCF enable
```

When you specify whether to enable or disable the SSH function independently for every function of Standard console, Read-only console and XSCF shell, issue the following command. The SSH settings of the function which omitted specification do not change.

```
# /opt/FJSVmadm/sbin/xscf_setssh RW enable SCF disable
```

● When you want to see the telnet or the SSHsettings status, use the scfstat command.
The following is an example of command execution.

```
# /opt/FJSVmadm/sbin/scfstat console
console:LAN
inet:xx.xx.xx.xx mask:yy.yy.yy.yy gateway:zz.zz.zz.zz
hostname:name.domain
dns:ww.ww.ww.ww
RW-port:enable(SSH)
RO-port:disable
SCF-port:enable
timeout:disable
```

Note:
When the version of Machine Administration function' does not correspond to the SSH settings of XSCF, it is displayed as "disable" in each function which was set to enable SSH in “Show Current Configuration” of “Console Administration” on the Machine Administration Menu.

Note:
The following is a reference of the xscf_setssh command on the Machine Administration function.

NAME

xscf_setssh - enabeles or disables the SSH function of XSCF

SYNOPSIS

/usr/sbin/FJSVmadm/xscf_setssh
[RW {enable|disable}] [RO {enable|disable}] [SCF {enable|disable}]

DESCRIPTION

The xscf_setssh command enables or disables the SSH fucntion of XSCF.
To use the SSH function, it is nessessary to have permitted the use of the telnet port of a pertinent function.

OPERANDS

RW
The SSH function of the Standard Console port is set
RO
The SSH function of the Read-only Console port is set
SCF
The SSH function of the XSCF-sh port is set

enable
enables the SSH function of the specified port.

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disable

disables the SSH function of the specified port.

EXIT STATUS

0: Normal end.

>0: An error occurred.

NOTE

To use the SSH function, it is neccessary to have permitted the use of the telnet port of a pertinent function by Machine Administration menu beforehand.
Until the SSH function is made effective by this command, the communication is done by telnet protocol.

Next: "Chapter 3 Connecting XSCF to Terminal"

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Chapter 3 Connecting XSCF or Server

This chapter explains the procedure for connecting consoles or terminals to have a access to XSCF, for connecting from UPC or to PC , and for construct RCI network.

This chapter has the following contents.

Contents:

3.1 Connecting Terminals to XSCF 3-2
3.2 Types of XSCF Connection 3-10
3.3 Connecting XSCF to a PC and UPC 3-12
3.4 Connecting of RCI 3-13
3.4.1 Basic configration 3-13
3.4.2 Cluster Configration 3-14
3.4.3 Method of constructing RCI 3-15
3.5 How to change the input-output destination of OS console to tty-a 3-17

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3.1 Connecting Terminals to XSCF

XSCF offers function to monitor and control the status of the system from terminals connected over LAN and/or to serial port, tty-a. This section describes the modes for connecting terminals and the procedure for connecting them to XSCF from a remote console. For the initial settings for connection to XSCF, see "Chapter2 Setting Up XSCF".

Terminal modes for connecting to XSCF

The following figure shows the terminal operating modes for connection to XSCF.

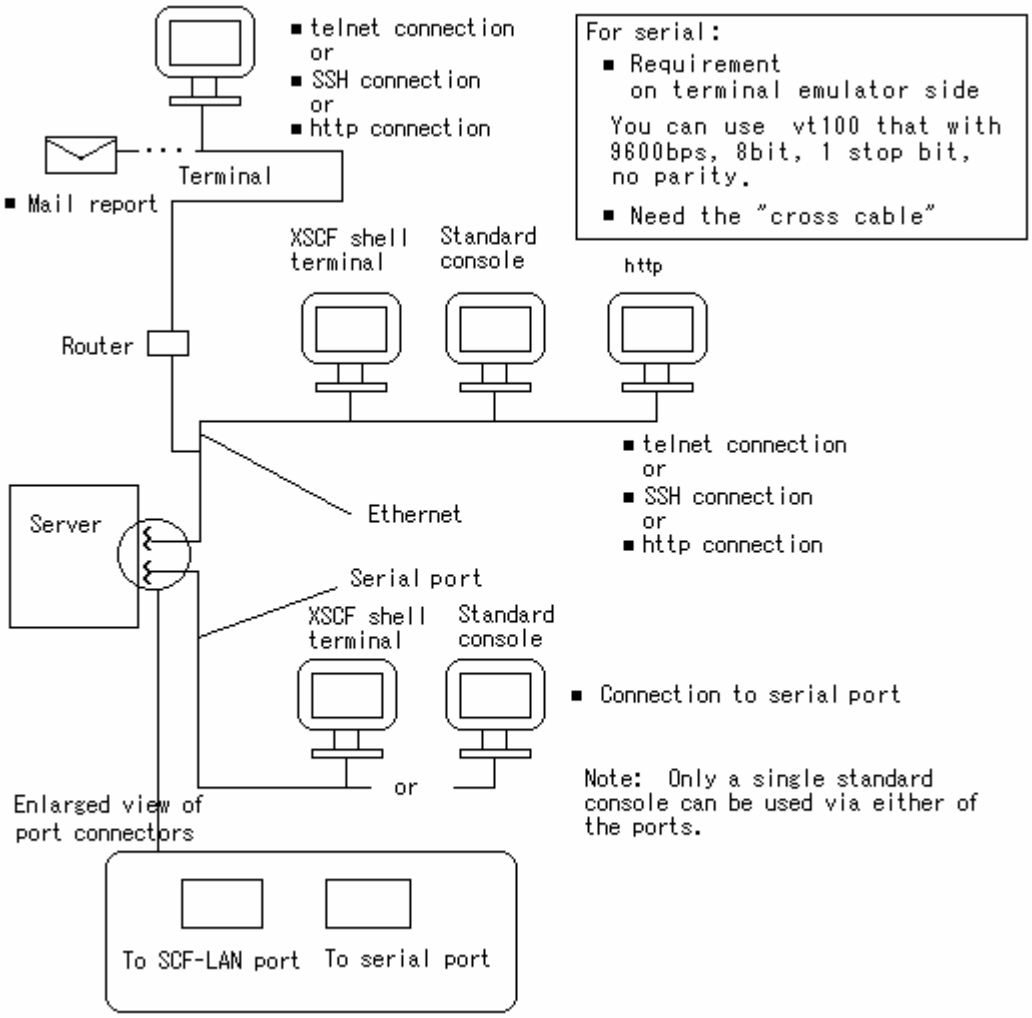

Figure 3-1 Operating modes for connection to XSCF

Note:
We strongly recommend that you should set the input-output destination of the OS console to the tty-a (Especially, when you use the graphic card). For more detail about changing the console to "tty-a", see "Chapter3 Connecting XSCF or Server".

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Port types and connected terminal types

As shown in Figure 3-1, the ports that XSCF can be connected are the two ports listed below. For the output destination of the OS console (standard console),use the "Console Administration" of the Machine Administration Menu to select one or the other. The default port when it's shipped from factory is the serial port (tty-a). The XSCF function operates the same way on both ports. Note, however, that the XSCF Web function cannot be used on a PC and workstation connected only to the serial port (tty-a) .

- Serial port (tty-a)
  When a terminal is connected to the serial port (tty-a), the XSCF shell can be used.

- Ethernet
  The XSCF shell can be used when telnet or SSH on a terminal is connected to Ethernet (LAN port hereafter). In addition, you can use the XSCF Web function, if enabled, from a web browser.

The following table lists the types of terminals connected to each port shown in Figure 3-1 and the port numbers.

Table 3-1 Connected terminal types

Port	Terminal type	Port number
LAN port	● Terminal dedicated to XSCF shell — You can use the XSCF shell with telnet or SSH connection (You may have to specify TCP/IP port number to your telnet or SSH program). — You can use either telnet or SSH at the same momemnt. — Only one user can use these port at the same momemnt. Note: After login, if the XSCF shell has not been accessed for a predetermined time, the user is forcibly logged out.	telnet : 8010 SSH : 8810
	● Standard console (OS console) — OS console enabled for input and output. — You can use either telnet or SSH at the same momemnt. — Only one user can use these port at the same momemnt.	telnet : 23 SSH : 22 Note: When you use the Standard console via LAN port, please set the Standard console to the "LAN port" by the "Console Administration" of the Machine Administration Menu.
	● Read-only console — OS console used for display only. — You can use either telnet or SSH at the same momemnt. — Two users can use telnet “8011” port. And one user can use telnet “8013” port. — Only one user can use SSH in each port at the same momemnt.	telnet : 8011, 8013 SSH : 8811, 8812 Note: the “8011” port (2 connection can be used.) is used for only the cluster control software when you use the cluster control software. The “8013” port is used for only the remote console port..

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	● When a URI is specified in the browser, the XSCF Web function can be used.	SSL : 443
Serial port (tty-a)	● XSCF shell terminal — The XSCF shell can be used by entering a keyword for XSCF. — Screen switching to and from the standard console can be done. Note: After login, if the XSCF shell has not been accessed for a predetermined time, the user is forcibly logged out.	—
	● Standard console — OS console input and output is enabled. Note, however, that the standard console cannot use the XSCF shell in a telnet connection. — Screen switching to and from the standard console can be done.	Note: Please set the Standard console to the "serial port" by the "Console Administration" of the Machine Administration Menu. (The default port when it's shipped from factory is the serial port (tty-a).)

Note:

For a single server, since no more than a total of two terminals can be connected at the same time to the XSCF shell via the serial port (tty-a) and the LAN port, only two users can use the XSCF shell at the same time.

Caution:

When using the XSCF shell simultaneously on the LAN port and serial port, note the following:

- If different power or reset instructions are received from the ports, the previous operation, such as power-off after power-on, may be canceled.

Connecting to XSCF using telnet via the LAN port

The procedure described in this section assumes that the XSCF initial settings described in "Chapter2 Setting Up XSCF" have been completed. For the connections between XSCF and PC/workstation with LAN cable, see the *User's Manual* for the server.

The following is the procedure for connecting to a terminal using telnet via the LAN port:

1. Make sure that the LAN cable from the HUB is connected to the SCF-LAN port connector on the rear of the server. Comfirm the secure connection to the PC or workstation, also.

2. On the PC or workstation to be used, use one of the following procedures:

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- Connecting to a terminal dedicated to the XSCF shell:

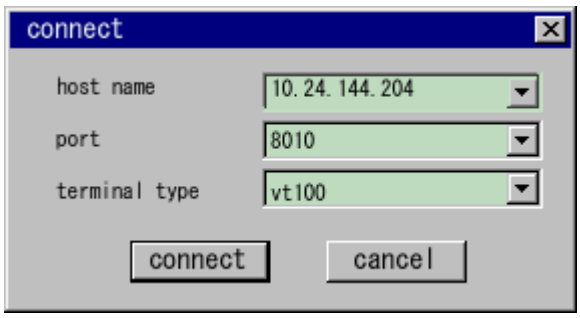

Figure 3-2 Example of activating the terminal emulator

1) To establish a telnet connection, activate the terminal emulator and specify the IP address of XSCF and port number 8010.
2) Enter the ID and password to start the XSCF shell.
3) Make sure that the XSCF shell prompt (SCF>) is displayed.
4) The XSCF shell can now be used.

Note:
You can connect to the XSCF shell even when the power of the system is off.

- Connecting to the "Standard console"(OS console):

1) If the server is off, turn it on to start the OS.
2) To establish a telnet connection, activate the telnet cliant and specify the IP address of XSCF and port number 23.
3) Enter the ID and password.
4) Make sure that the terminal becomes the OS console for which input and output are enabled.

Caution:
When you use the Standard console via LAN port, please set the Standard console to the "LAN port" by the "Console Administration" of the Machine Administration Menu.

Note:
When you send a Break, the break signal is issued to the server

Connecting to XSCF using SSH via the LAN port

The procedure described in this section assumes that the XSCF initial settings described in "Chapter2 Setting Up XSCF" have been completed. For the connections between XSCF and PC/workstation with LAN cable, see the *User's Manual* for the server.

The following is the procedure for connecting to a terminal using SSH via the LAN port:

1. Make sure that the LAN cable from the HUB is connected to the SCF-LAN port connector on the rear of the server. Comfirm the secure connection to the PC or workstation, also.

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2. On the PC or workstation to be used, use one of the following procedures:

- Connecting to a terminal dedicated to the XSCF shell:

  1) To establish a SSH connection, activate the SSH cliant and specify the IP address of XSCF and port number 8810.
  2) Enter the ID and password to start the XSCF shell.
  3) Make sure that the XSCF shell prompt (SCF>) is displayed.
  4) The XSCF shell can now be used.

Note:
You can connect to the XSCF shell even when the power of the system is off.

- Connecting to the "Standard console"(OS console):

  1) If the server is off, turn it on to start the OS.
  2) To establish a SSH connection, activate the SSH cliant and specify the IP address of XSCF and port number 22.
  3) Enter the ID and password.
  4) Make sure that the terminal becomes the OS console for which input and output are enabled.

Caution:
When you use the Standard console via LAN port, please set the Standard console to the "LAN port" by the "Console Administration" of the Machine Administration Menu.

Note:
When you send a Break, the break signal is issued to the server

Connecting to XSCF via the serial port (tty-a)

The following is the procedure for connecting to a terminal via the serial port (tty-a).

1. Make sure that the serial cable is connected to the serial port (tty-a) connector on the rear of the server and connected securely to the PC or workstation.

2. Check whether the following are set on the terminal software.

Baud rate :9600bps, Data length :8 bit, No parity, STOP bit :1 bit, No flow control, Delay : Except for 0.

The following is the setting Example:

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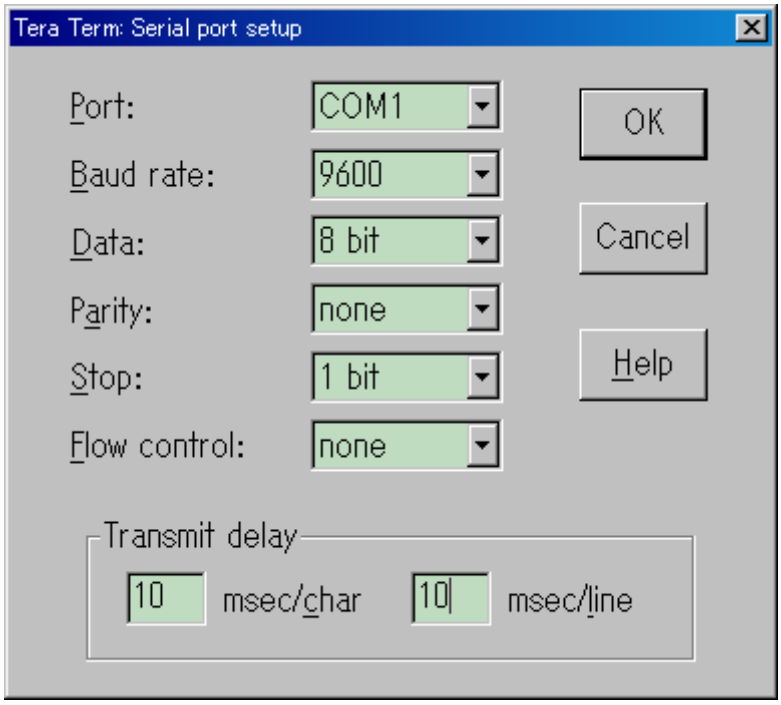

Figure 3-3 Example of setting of terminal software

Note:
Please increase the delay, when you cannot connect well.

3. On the PC or workstation, use one of the following procedures:

- Connecting to a terminal dedicated to the XSCF shell:

  1) To use the XSCF shell terminal, enter the keyword, which is a tilde plus a period (~.). This combination is the default value. For changing the keyword, see "Chapter6 How to Use the XSCF Command Shell".
  2) Enter the ID and password to start the XSCF shell.
  3) Make sure that the XSCF shell prompt (SCF>) is displayed.
  4) The XSCF shell can now be used.

Note:
Even though the server is off, the XSCF shell can be used.

- Connecting to the "Standard console"(OS console):

  1) If the server is off, turn it on to start the OS.
  2) Make sure that the terminal becomes the OS console for which input and output is enabled immediately after power-on.

Caution:
When you use the Standard console via serial port (tty-a), please set the Standard console to the "serial port" by the "Console Administration" of the Machine Administration Menu.
(The default port when it's shipped from factory is the serial port (tty-a).)

Note:
When you send a Break, the break signal is issued to the server

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Switching between "XSCF shell" and "Standard console" (only for serial port)

You can switch the purpose of terminal from "Standard console" to "XSCF shell" or vice versa. This switching is only valid on serial port (tty-a) connection.

The following is the switching procedure:

1. On the XSCF shell terminal screen, execute the exit command to switch to the standard console.
2. To switch from the standard console to the XSCF shell, enter a tilde and a period (~.)(default value).

Processing for switching the standard console port (OS console)

When XSCF shell terminals and standard consoles are connected to both LAN ports and serial ports (tty-a) as shown in Figure 3-1, the output destination port of the standard console screen can be switched with the Machine Administration Menu. Since, unlike an XSCF shell terminal, a standard console cannot be used via both ports at the same time, be sure to select one or other of the ports.

For the Machine Administration Menu used to select ports, see "Chapter2 Setting Up XSCF".

- To change the output destination of the standard console connected via the LAN port to the serial port (tty-a), use the following procedure:

1. On a Standard console that is connected to LAN port, start up the Machine Administration Menu. use the "Console Administration" option of the XSCF Administration Menu to set the output destination of the standard console to the "serial port".
2. From that point, the standard console connected via the LAN port does not display the console. Make sure that the standard console terminal connected via the serial port (tty-a) displays the console.

- To change the output destination of the standard console connected via the serial port (tty-a) to the LAN port, use the following procedure:

1. On a Standard console that is connected to serial port, start up the Machine Administration Menu. use the "Console Administration" option of the XSCF Administration Menu to set the output destination of the standard console to the "LAN port".
2. From that point, the standard console connected via the serial port (tty-a) does not display the console. Make sure that the standard console terminal connected via the LAN port displays the console.

Note:

If the Machine Administration Menu cannot be used or the console cannot be used via LAN port, please use the Console you can access from PC which is directly connected to XSCF by serial port (tty-a). Then login to the XSCF Shell and set the console to "serial" with "set-console-device" command.

- To change the output destination of the standard console connected via the LAN port to the serial port (tty-a) forcibly when you don’t set up “User Account Administration”, use the following procedure:

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1. Power off the server.
2. Connect the console terminal to the serial port(tty-a).
3. Set the mode switch on the server front panel to UNLOCK mode.
4. Push the Power switch button for 10 seconds or more. The ONLINE LED and the CHECK LED on the front panel blink several times. This means that the standard console change to the serial port(tty-a).
5. Make sure that the standard console terminal connected via the serial port(tty-a) displays the console.

Next: 3.2 Types of XSCF Connection

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3.2 Types of XSCF Connection

This section describes the types of XSCF connection.

Connecting XSCF to the LAN port (recommended)

XSCF is connected to the SCF-LAN port. The Ethernet connection used for XSCF connection is shown in Figure 3-1. When XSCF is connected via the LAN, the XSCF functions listed below can be fully used. For the summary of these functions, see "Chapter1 Overview of XSCF".

- XSCF shell function
- XSCF Web function
- SNMP agent function
- Mail report function

[1] Intranet connection

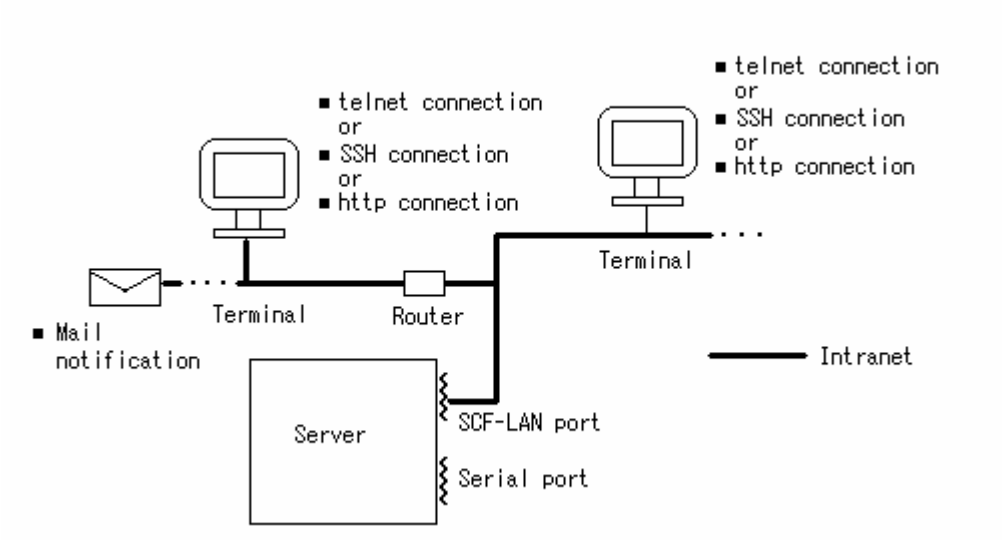

Figure 3-4 Intranet connection

When you use the XSCF Shell, you can have high security by using SSH not telnet.

The XSCF Web function uses the Secure Socket Layer (SSL) to provide authentication security.

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[2] Connection via an external network

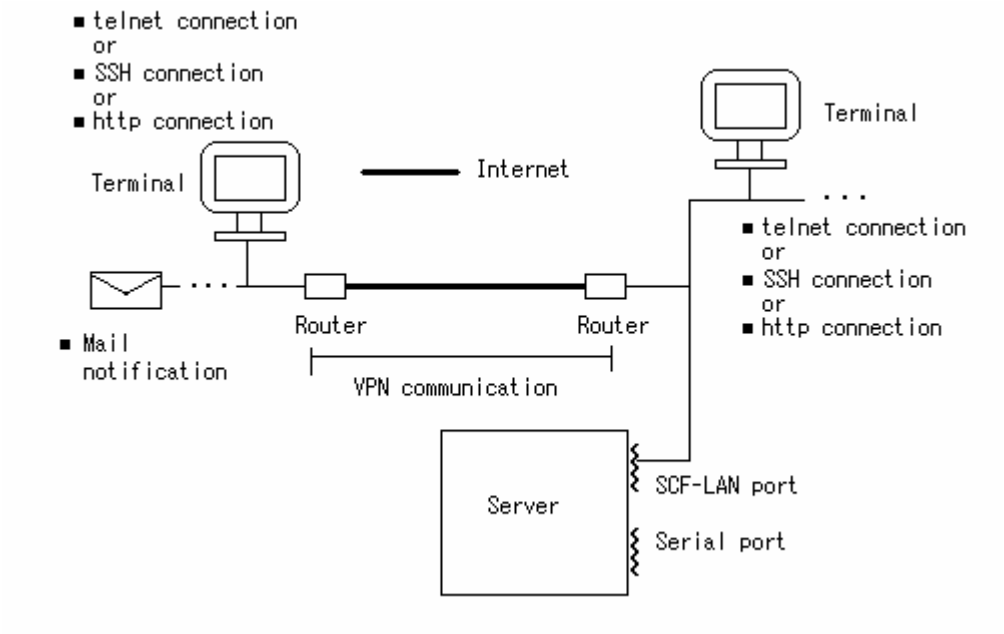

Figure 3-5 Connection of external Internet using VPN communication

For the security reason, using Virtual Private Network, VPN, as for external network is strongly recommended.

Connecting XSCF to the serial port (tty-a)

You can use XSCF by connecting to the serial port (tty-a). The XSCF connection to the serial port is also shown in Figure 3-1. The following XSCF functions are available when it is connected to the serial port. Also listed the advantage of such a connection.

- XSCF shell function
- Advantageous when connection to the LAN is not desirable for reasons of security

Connecting XSCF to both the LAN port and the serial port (tty-a)

XSCF is connected to both the LAN port and the serial port (tty-a). This type of connection is also shown in Figure 3-1. XSCF, when connected to both ports, has the following advantage in addition to the functions described for connection to the LAN port:

- Multiple users can use the XSCF shell function.

Next: 3.3 Connecting XSCF to a PC and UPC

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3.3 Connecting XSCF to a PC and UPC

It describes how to connect XSCF with PC and UPC(UPS I/F).

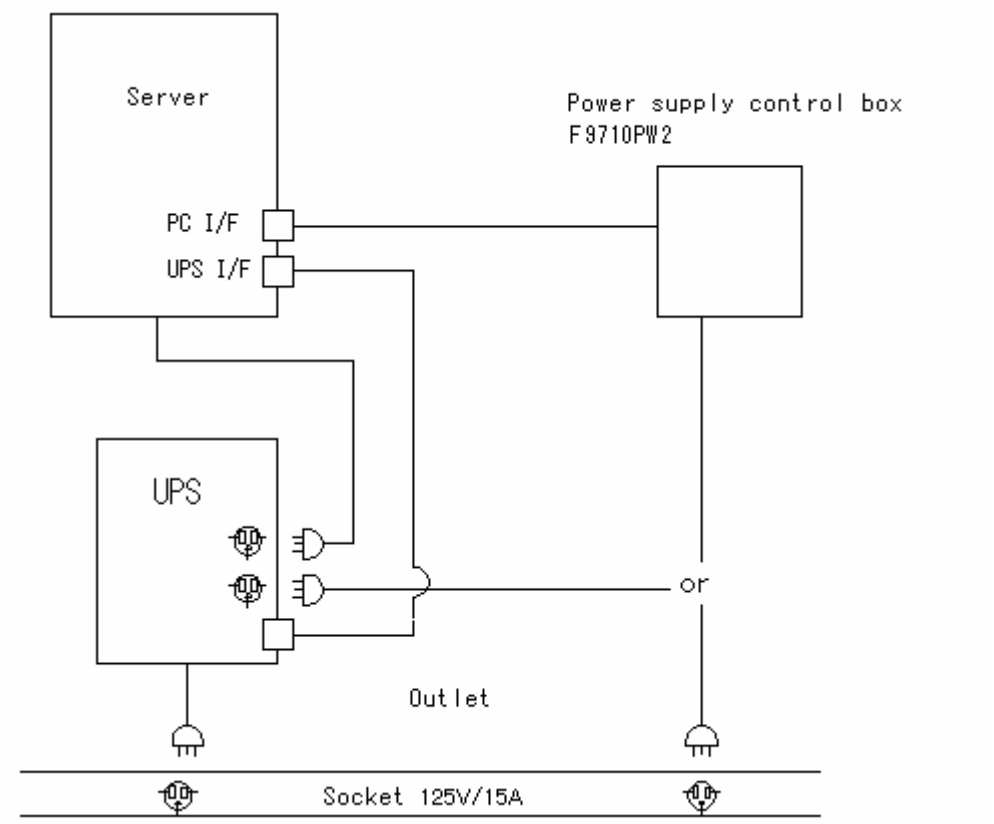

Figure 3-6 Connected chart of UPC, PC

Use PC I/F when the power supply of the server is turned on from the input-output device(power supply control box etc.).

Use UPC(UPS I/F) to request shut down of the system promptly from UPS to defend the server from voltage reduction or black out of commercial power source.

Note:
Power supply control box may not be available in your area due to voltage difference.

Next: 3.4 Connecting of RCI

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3.4 Connecting of RCI

Use the RCI interface to control the power supply of the servers and the I/O devices composed with the cluster. This section explains the connection method.

For the initialization when RCI is connected with XSCF, refer to "How to configuring RCI 3.4.3".

3.4.1 Basic Configuration

The case where two or more IO devices are connected with one server is indicated as follows.;

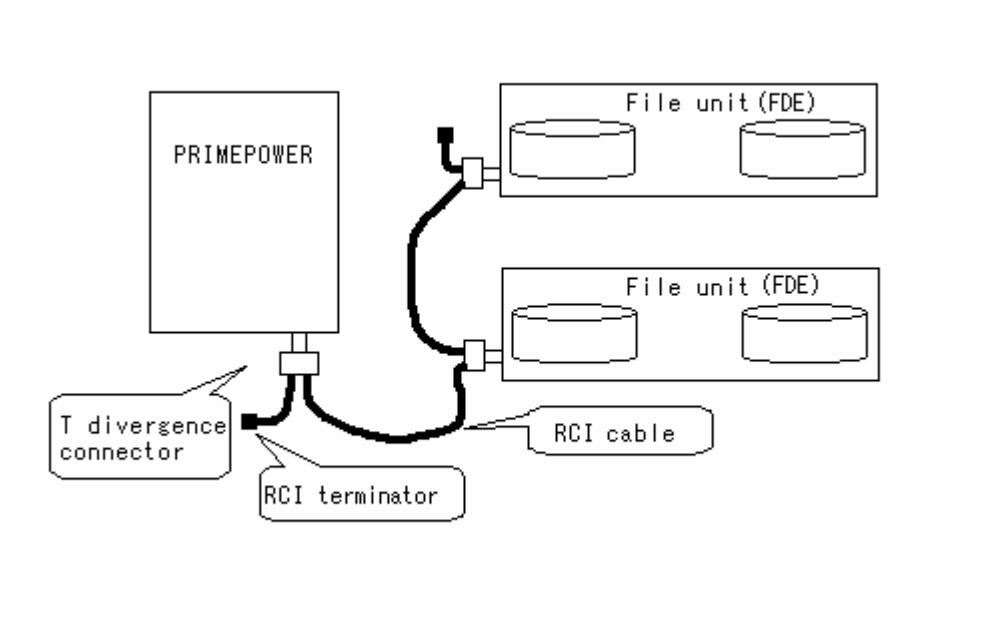

Figure 3-7 connection chart of basic configuration

Connect the RCI cable to each device with T-branch connector.

Connect the RCI terminator with T divergence connector which becomes both ends of the RCI connection.

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3.4.2 Cluster Configuration

The case where two or more I/O devices are connected with two or more servers is indicated as follows.;

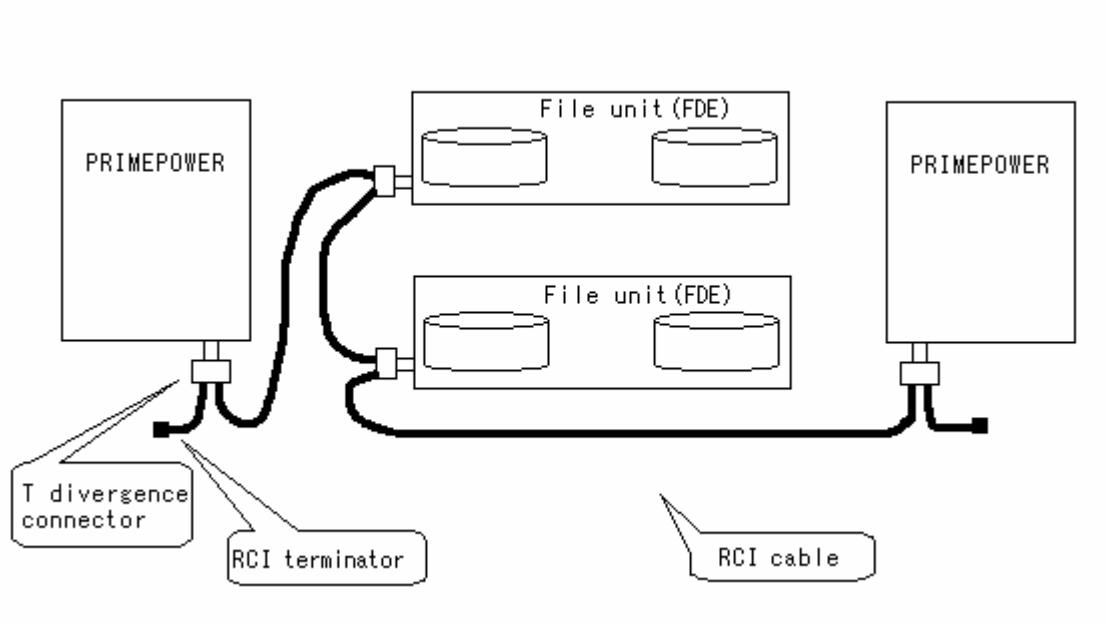

Figure 3-8 Connected chart of cluster configuration

Connect the server with both ends of the RCI connection.

The case where two or more servers share disk file unit (File disk Enclosure: FDE) by the SCSI connection:

By connecting the servers and FDEs with RCI, FDEs are turned on if the server which is turned on exists. FDEs are turned off when all servers are turned off.

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3.4.3 How to Configure RCI

Only our trained field engineer allowed to do following RCI related maintenance.

The following operations are necessary to use RCI.
Operate it at the ok prompt of OBP.

1. Check the present RCI configuration, and the address of the server.

```
{0} ok rci-config
HOST
 address: 000f7f00 mode:20a0 status:00000000
------------------------------------------------------------------
LIST
 address    status    device-class sub-class
```

   - [HOST]address: address of the server (000f7f00 is the initial value of address)
   - [HOST]mode: mode of power supply for remote control (*1)
   - status: state of device identified by address displayed in the same row (*2)

2. Operate the RCI configuration.

```
{0} ok rci-config 1 1
Setting server ID=1
{0} ok rci-configio-init
      Normal End
```

   - rci-config n n : n is the host number (the integer number from 1 to 15)
   - rci-configio-init : Start the configuration process.
     ("...." is displayed while processing it.)

3. Check the information of setting.

```
{0} ok rci-config
HOST
 address: 000101ff mode:20a0 status:80000000
LIST
 address     status   device-class sub-class
 000101ff    98         0001          0a
 003001ff    90         0400          05
 003002ff    90         0200          02
 002007ff    90         0800          01
{0} ok
```

   - device-class: device type code (*3)
   - sub-class: device type detailed code

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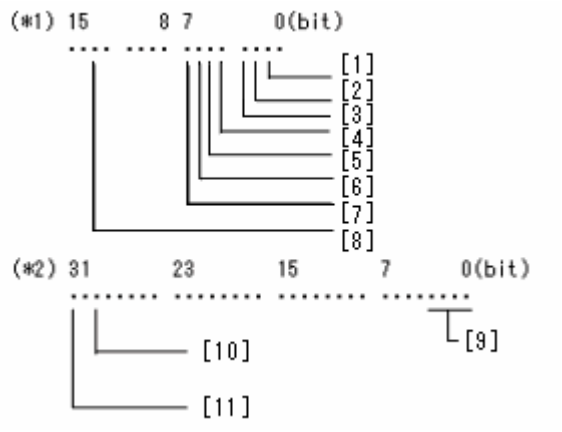
(*1)～(*3) is as follows.



(*1)

[1] bit1 the system reset instruction can be received
(1 : enable to receive)

[2] bit2 the forced power off instruction can be sent
(1 : enable to send)

[3] bit3 Automatic power-on prohibition mode after the forced power off can be set
(1 : unable to start)

[4] bit4 shutdown instruction can be received
(1 : enable to receive)

[5] bit5 shutdown instruction can be sent
(1 : enable to send)

[6] bit6 instruction to turn on power can be received
(1 : enable to receive)

[7] bit7 instruction to turn on power can be sent
(1 : enable to send)

[8] bit13 instruction to turn on power can be received from PC I/F
(1 : enable to receive)

(*2)

[9] bit0-3 the result of configured RCI
(0 : normal / Excluding 0 : abnormal)

[10] bit29 the state of configuring RCI
(1 : now configuring RCI)

[11] bit31 the state of RCI operation
(1 : active)

(*3)

0001: Server
0200: Power controller
0400: Disk file unit
0800: Line switch device

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3.5 How to change the input-output destination of OS console to tty-a

It describes how to change the input-output destination of the OS console to the tty-a.

"tty-a" should be used as console to access console via SCF-LAN or serial port(tty-a). In addition to this, ipl-log and panic-log, which is collected by XSCF, is availabe only when output of console is "tty-a".

To enable XSCF as the Standard console(OS console) device, you must do the following operation from [1] to [3]:

Note:
When you use the graphic card, we strongly recommend that you should do as below.

[1] Changing the environment variable properties of NVRAM.

1. Change the "MAINTENANCE mode" on the MODE SWITCH of the server operation panel.
2. Power on the server and enter the following commands at the *ok* prompt on the Console:

   ok setenv input-device ttya
   ok setenv output-device ttya

3. Enter the following command and check the information as below.

   ok printenv
   input-device ttya
   output-device ttya

4. These properties take effect after the next server reset.

5. After completing the OBP setting, set the MODE switch back to the setting for normal operation (LOCK).

   Caution:
   The break signal becomes an enable, when the MODE switch is "MAINTENANCE mode". If you forget to return the MODE after the MODE switch is changed to "MAINTENANCE mode", the break signal might be issued to the server and OS might be downed. After completing the setting, please set the MODE switch back to the setting for normal operation (LOCK).

[For your information]
When graphic card is installed, default values of "input-device" and "output-device" are as follows:

input-device keyboard (Keyboard directly connected system)
output-device screen (Graphic board)

Therefore, if keyboard and graphic board are mounted on the server, they are used as the standard console. If not mounted, the options are not valid and ttya is the standard console.

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[2] Modify the Console definition of CDE.

1. Start up the OS by single user mode.
2. Update the next file.

   /usr/dt/config/Xservers

Change "Console" to "none" in the last line of this file.

```
#:0     Local local_uid@console root/usr/openwin/bin/Xsun :0 -nobanner
:0      Local local_uid@none root/usr/openwin/bin/Xsun :0 –nobanner
```

3. This configuration takes effect after the next server reset.

[3] Stop the port monitor(ttymon) when the console is set to the basic serial port.

1. Start up the OS by single user mode.
2. Enter the following commands.

```
# /usr/lib/saf/sac -t 300 &
# /usr/sbin/pmadm -d -p zsmon -s ttya
```

3. This configuration takes effect after the next server reset.

[Caution]
After you perfom the operation[2], the result is that CDE screen is not "Console", anymore, so, you can't log in from this screen by root.
Use following configuration to allow root to sign on from CDE, if needed:

1. Log in from the tty terminal.
2. Perform the below setting and you can log in from the CDE.

   Update file : /etc/default/login
   Changing : Coment out the 15th line of this file as below.
   "CONSOLE=/dev/console"

Next: "Chapter4 How to Use the Remote Panels"

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Chapter 4 How to Use the Remote Panel

This chapter describes the Remote Panel that can be used on the XSCF Web function and explains how to use them.

This chapter has the following contents.

Contents:

4.1 Overview of the Remote Panel 4-2
4.2 How to Use the Remote Panel 4-4
4.3 LED Indicators on the Remote Panel 4-7
4.4 Differences from the Operating Panel 4-9

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4.1 Overview of the Remote Panel

By accessing the remote Panel from the XSCF Web function page view, you can check the LED indicators to determine the operating status of the server and can control server power from a remote location. The remote Panel provide Web browser-based access to the server's operating panel that are in the front and the rear of server (front panel and back panel hereafter). You can also use the XSCF shell commands on the XSCF console to control remote operation of the server and to identify the LED states.

For information about the XSCF Web function, see "Chapter5 How to Use the XSCF Web Function".

For information about the operating Panel, see the *User's Manual* for the server.

For information about the XSCF shell commands, see "Chapter6 How to Use the XSCF Command Shell".

Table 4-1 outlines the remote Panel.

Table 4-1 Remote panel components

Component	Description
Front panel	Indicates the states of the three LEDs: — POWER LED: Indicates whether the power of the server is on. — ONLINE LED: Indicates whether the server has been started up. — CHECK LED: Indicates error of the server and the location of the server. Has three buttons for performing operations: — Power switch: Turns power to the server on and off. — Reset switch: Resets the server. — Request switch: Instructs the system to output an OS dump. Note: To enable these three switches, specify "Enable with read/write mode" at the optton of "XSCF Web Administration" of "XSCF Administration" in Machine Administration Menu. In addition to, log in XSCF with root-level authority. Indicates one of the three states to which the mode switch is currently set: — LOCK mode — UNLOCK mode — MAINTENANCE mode
Back panel	Indicates the states of two LEDs: — CHECK LED: Indicates a server error and the location of the error. — SCF Ready LED: Indicates the initial state of XSCF.
Message window	Displays a message.

Figure 4-1 shows the remote Panel.

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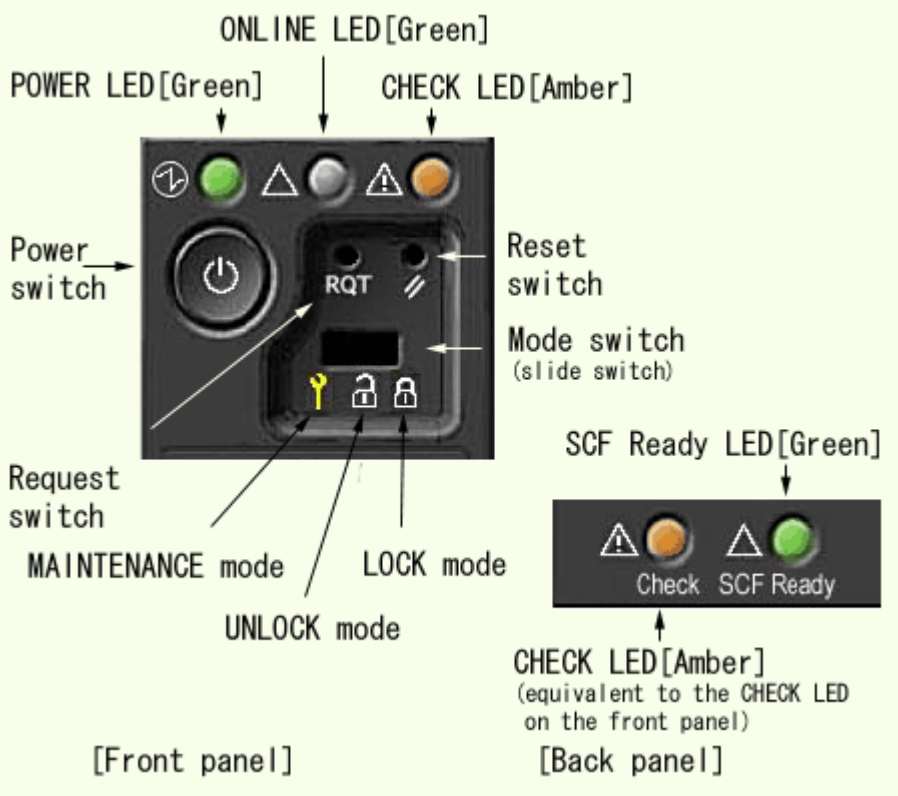

Figure 4-1 Remote Panel

Next: 4.2 How to Use the Remote Panel

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4.2 How to Use the Remote Panel

This section explains how to use the remote Panel.

Before using the remote Panel

Before using the remote Panel, be sure to specify the following:

- Network settings and Console settings for enabling XSCF
- User account settings for authentication on the Web
- http settings for enabling the XSCF Web function
  The http settings specify the names of hosts to which access is permitted, whether the remote panel is to be displayed graphically or in text, and whether operations against switches are allowed.

  Note:
  To enable the switch operation, specify “Enable with read/write mode” at the optton of “XSCF Web Administration” of “XSCF Administration” in Machine Administration Menu. In addition to, log in XSCF with root-level authority. For more information about settings, see “Chapter2 Setting Up XSCF”.

- Mailer settings for immediate reporting by mail to users of problems that occur while the remote Panel are being used.

For details of the settings, see "Chapter2 Setting Up XSCF" and "Chapter5 How to Use the XSCF Web Function".

Accessing the remote Panel

1. On a console connected to the SCF-LAN port, open a browser page and enter the specified host name to make access to XSCF.
2. The XSCF top page is displayed.
3. Click "login" button on the top page, then log in to XSCF using the user account.
4. Select the remote Panel from the displayed index.

Operating the switches

Figure 4-1 shows the switch buttons and the mode switch on the remote Panel.
The switches are listed below:

- Power switch
- Reset switch
- Request switch
- Mode switch (slide switch)

Power switch

Click the power-switch button on the front remote panel to turn server power on and off. To be able to performe this switch operation, set “Enable with read/write mode” and log in XSCF with root-level authority.
When you turn on the server power, the following events occur:

1) The POWER LED on the front panel light immediately. However, there is a possibility of not lighting at once according to the setting.

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2) The ONLINE LED on the front panel blinks when the power-on sequence has been successfully completed.

When you turn off the server power, the following events occur:

1) The ONLINE LED on the front panel starts blinking immediately.
2) Only the SCF Ready LED remains on. The other LEDs go off when the power-off sequence is completed successfully. However, there is a possibility that POWER LED does not go off at once according to the setting. Moreover, there is a case that the Check LED keep blinking when the trouble has already been found in the server..

Note:

Whenever you control the power from the front remote panel, the Web browser window is refreshed at intervals of about 10 seconds.
If you cannot power the server on or off using the power switch, do the following:

1) Confirm that the SCF Ready LED on the back panel is green.

Reset switch

Press the reset-switch button on the front remote panel to reset the server. To be able to performe this switch operation, set “Enable with read/write mode” and log in XSCF with root-level authority.

When you click the reset-switch button, the following events occur:

1) The ONLINE LED on the front panel blinks.
2) The ONLINE LED on the front panel lights as soon as the reset sequence is completed successfully.

Note

The reset switch resets the system. Therefore, pushing the reset switch is prohibited for usual operation. Please push the request switch and execute the crash dump when the system has been no responses etc or it is necessary to reset the system unavoidably. After the crash dump is gathered, the system is reset.

Whenever you reset the server, the Web browser window is refreshed at intervals of about 10 seconds.
Resetting the server while the OS is running can damage the disk containing the OS. Use care when using the reset switch on the front remote panel.

Request switch

Press the request-switch button on the front remote panel to request output of an crash dump to OS. To be able to performe this switch operation, set “Enable with read/write mode” and log in XSCF with root-level authority.

Note

The request switch causes the system panic for the crash dump collection. This operation is a maintenance operation of the system investigation etc. , and has the possibility of destroying the file system when panic is requested while OS is accessing the file system. Therefore, please do not operate it, except when it is necessary to gather the crash dump due to the system investigation purpose or the abnormality such as without the response from the system. The crash

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dump might not be able to be gathered according to the state of the system.

Mode switch

The mode switch on the front remote panel indicates the state of the slide switch on the server's front panel.
Note that you cannot set the mode switch to LOCK, UNLOCK, or MAINTENANCE on the front remote panel.

Checking the states of the LEDs

You can determine the status of server operation by checking the LEDs.

Viewing messages

The kinds of information listed below are displayed on the remote Panel. For information about the logs listed below, see "Appendix B XSCF Log Information".

- Error log messages
- Power log messages
- History of panel messages displayed

Next: 4.3 LED Indicators on the Remote Panel

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4.3 LED Indicators on the Remote Panel

The LEDs listed below are mounted on the front panel and back panel shown in Figure 4-1. This section explains of the LED indicators on the remote Panel. These indicators have the same meaning as the LED indicators on the operating Panel. For details of the LEDs, see the *User's Manual* for the server.

- POWER LED
- ONLINE LED
- CHECK LED
- SCF Ready LED

Before checking the LEDs

Turning the power on or off or resetting the server from the front remote panel refreshes the XSCF Web browser page at intervals of about 10 seconds. If necessary, the user must manually refresh the browser page.

POWER LED

The POWER LED on the front remote panel is green when it is on. Refresh the Web browser page, then check the POWER LED to determine whether server power is on or off. While system is working, the POWER LED is green. You can determine the operating status of the server by checking the POWER LED together with the other LEDs.

ONLINE LED

The ONLINE LED on the front remote panel is green when it is on. When the server has been turned on, the ONLINE LED lights intermittently until the system successfully completes the power-on sequence. When the server is turned off, the ONLINE LED also lights intermittently. Like the POWER LED, the ONLINE LED is green while system is working. You can determine the operating status of the server by checking the ONLINE LED together with the other LEDs.

CHECK LED

The CHECK LED on the front remote panel is amber when it is on. The CHECK LED indicates a server error. Both the CHECK LED on the operating panel and the one on the front remote panel blink when there is a server error. When server operation is normal, the CHECK LED is off. You can determine the operating status of the server by checking the CHECK LED together with the other LEDs.

When more than one same type of system is installed in the same area, it may be difficult to find out the target system. By checking the CHECK LED, it will be more easier to find target faulty machine.

In addition to this, by using command on XSCF shell, you can change the status of CHECK LED to "on" or "blink". And, you may easily find target machine, even when it does not have any faulty components, by check LED. The remote Panel can also be used to identify the server. For the XSCF shell commands that are used to check the LEDs, see "Chapter6 How to Use the XSCF Command Shell".

SCF Ready LED

The SCF Ready LED on the remote panel is green when it is on. When power has been turned on,

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the SCF Ready LED blinks throughout the system power-on sequence. The blinking indicates that XSCF is being initialized. When the system power-on sequence is completed, the SCF Ready LED lights. When power is turned off, the SCF Ready LED remains on until the power-off sequence has been completed. Like the POWER LED and the ONLINE LED, the SCF Ready LED is green while system is working. You can determine the operating status of the server by checking the SCF Ready LED together with the other LEDs.

For information about the server status and LED indications, see the *User's Manual* for the server.

Next: 4.4 Differences from the Operating Panel

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4.4 Differences from the Operating Panel

This section describes the differences in indications and operations between the remote Panel and the operating Panel.

Table 4-2 lists these difference by component.

Table 4-2 Remote panel and operating panel differences

Component	Indication/operation	Remote Panel	Operating Panel
Front panel	Three LED status indicators: — POWER LED — ONLINE LED — CHECK LED	Same function. Note that the front remote panel refreshes the XSCF Web browser page at intervals of about 10 seconds. If necessary, refresh it manually.	
	Three button operations: — Power switch — Reset switch — Request switch	They do not depend on the mode switch.	Pressing of switch may be igonored depending on the mode specified by 3-mode switch. Refer to *User's Manual* for the server for more detail.
	3-mode switch/indicator: — LOCK mode — UNLOCK mode — MAINTENANCE mode	Indicates the state of the switch only. The mode cannot be switched.	Indicates the state of the switch, and the mode can be switched.
Back panel	Two LED status indicators: — CHECK LED — SCF Ready LED	Same function.	
Message window	Displays messages.	Displays messages.	No messages are displayed.
Initial settings	Settings enabling XSCF to be used	Required.	Not required.

Next: "Chapter5 How to Use the XSCF Web Function"

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Chapter 5 How to Use the XSCF Web Function

This chapter explains how to use the XSCF Web function.

This chapter has the following contents.

Contents:

5.1 Overview of the XSCF Web Function 5-2
5.2 Starting the XSCF Web Function 5-5
5.3 Logging In to or Out from XSCF 5-7
5.4 XSCF Web Function Pages 5-8

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5.1 Overview of the XSCF Web Function

The XSCF Web function, which connects to a server on the Web using the http and SSL/TLS protocols, enables the display of the server status, the control of server-connected devices, and the viewing of server configuration with a Web browser.
Registered users can connect to XSCF Web function pages using a Web browser on a client terminal and then log in to XSCF using the XSCF user account (XSCF account hereafter). After login, the XSCF page index, from which the desired page can be selected, is displayed. For information about registering XSCF users, see "Chapter2 Setting Up XSCF".

Table 5-1 describes the XSCF Web function pages.

Table 5-1 XSCF Web function pages

Page	Description
Top	It's a top page of XSCF. Allows users to call the authentication page. Also allows users to specify XSCF of other server.
Authentication	Allows users to log in to XSCF using the XSCF account.
● Index	Allows users to select a desired page when login has been successful.
— Remote-control panel	Displays the front and back remote panel of the server. If settings for XSCF Web function permit operations on the remote panel, the switches on the remote panel, with the exception of the mode switch, are enabled. Note: To be able to performe switch operations, log in XSCF with root-level authority.
— Server status	Displays the server status of that moment. Specifying a unit that can be selected displays the status information for the unit.
— Access status	Enables the logins to the XSCF Web function pages to be viewed.
— Change of password	Enables the password of the XSCF account to be changed.
— Error log	Displays the XSCF error log.
— Power log	Displays the XSCF power log.
— Message history	Displays the remote panel message history.

The following are sample pages of Web browser.

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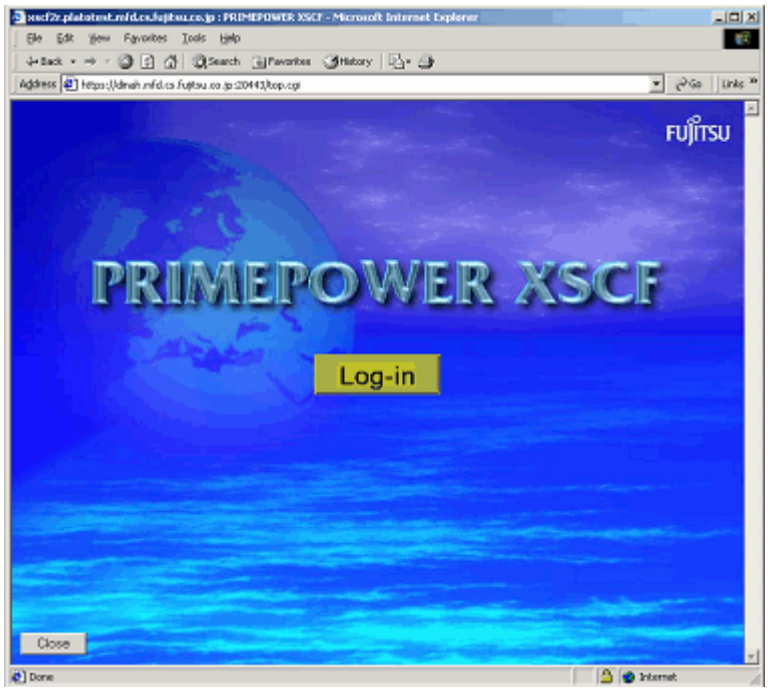

Figure 5-1 Example of Top page

Figure 5-2 Example of Index page

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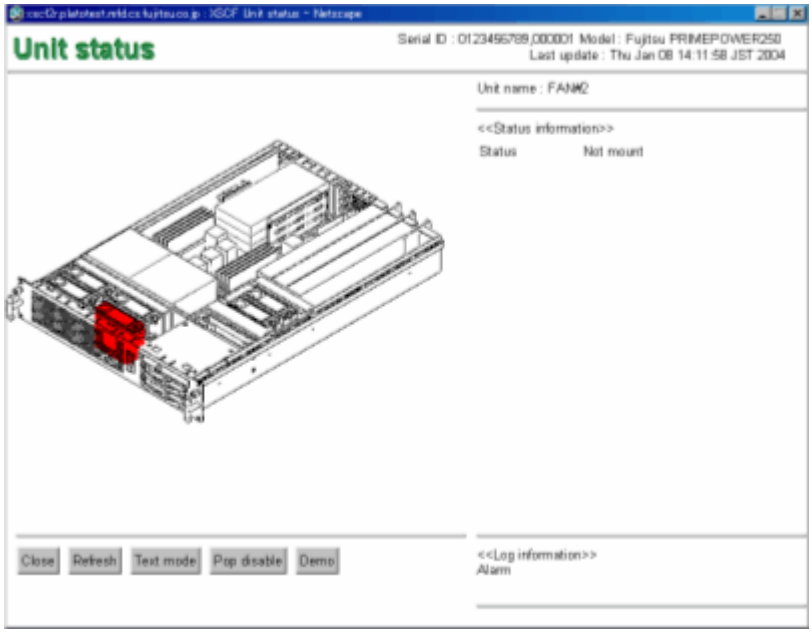

Figure 5-3 Example of Unit status page

Information

The layout and the content of the window show a sample. It might be changed because of the function improvement.

Next: 5.2 Starting the XSCF Web Function

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5.2 Starting the XSCF Web Function

Prerequisites

The initial settings of the XSCF Web function are disabled by default. To use XSCF Web function, the following must be specified:

- XSCF account
- IP address of a client terminal
- XSCF Web function mode
- Mail report settings (Optional, but recommended because you can receive a mail from system in case of login failure.)

For details of the above settings, see "Chapter2 Setting Up XSCF".

Supported browsers

Table 5-2 lists the Web browsers supported by the XSCF Web function.

Your Web browser needs functions, listed in the table below, to use the XSCF Web function, properly. Make sure these settings are enabled.

Table 5-2 Supported browsers

Browser	Version
Microsoft(R) Internet Explorer	5.5, 6.0
Netscape Communicator(TM)	4.76、4.78
Netscape Navigator(TM)	6.2.x, 7.0x

Functions to be enabled on the browser

1. SSL (Secure Sockets Layer Protocol) Version 3 / TLS (Transport Layer Security) Version 1
2. JavaScript
3. Cookies
4. Graphic display capability (when graphics mode is used)
5. For Microsoft(R) Internet Explorer, go to "Advanced" tab in "Internet Options" and uncheck "Display a notification about every script error"

Specifying the URL

For the URL, specify the IP address or host name assigned to XSCF with root directory.

Example）URL https:// 192.168.111.111 (The IP address of XSCF is input by number) /
Alternatively, https://XSCF-host-name (Note: This is not a host name of Solaris OS) /

Note:

When the communication begins, a browser might request the confirmation of the certificate. Please you must confirm the content and accept the certificate at that time.

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Caution at the connection

If a lot of data is made to output to the console while using the SSH function, You may be unable to connect with the XSCF Web function.

Next: 5.3 Logging In to or Out from XSCF

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5.3 Logging In to or Out from XSCF

Logging in to XSCF

To connect to the XSCF Web function pages, log in to the XSCF top page. If login is successful, the index page is displayed. If login fails, a message indicating that login failed is displayed.

When failure of the log in satisfy the following condition, the failure is reported by mail to the system administrator.

a. XSCF users with the same account attempt to access any XSCF Web pages, and five or more attempts failed within 3minutes due to authentication failure.

To use the mail report function, register a destination address for the mail in advance. For information about specifying the destination address, see "Chapter2 Setting Up XSCF".

Access status monitoring

The XSCF Web function monitors the accounts of XSCF users who are logging in to XSCF. If login to XSCF has been successful but no access is made for a certain time, an authentication timeout occurs and the XSCF Web function logs the user out. If an attempt is made to access the XSCF Web function after a timeout, a dialog box reporting an authentication timeout is displayed. The top page is then displayed. To use the XSCF Web function again, log in to XSCF again.
The authentication timeout setting can be changed. For details of specifying the authentication timeout setting, see "Chapter2 Setting Up XSCF".

Logging out from XSCF

To exit the XSCF Web function, log out from XSCF on the index page. If you do not log out and simply terminate the XSCF Web function connection, you may not be able to log in to XSCF again from the same account for a certain time.

Attempt of login after authentication timeout will be refused with following condition and period:

- Condition
  - Case1: The cookies is deleted.
  - Case2: You try to login to an another browser.
- Time during which login refused
  The maximum time during which login will be refused is determined by the authentication timeout setting.
  For example, if 30 minutes is specified as the timeout setting and if you have accessed XSCF for 10 minutes when you terminate the connection, you will not be able to access XSCF for 20 minutes.
  The maximum timeout setting is 255 minutes.

Next: 5.4 XSCF Web Function Pages

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5.4 XSCF Web Function Pages

This section describes the organization of the XSCF Web function pages. For information about the operations available on these pages, see "Chapter4 How to Use the Remote Panel" and "Chapter6 How to Use the XSCF Command Shell".

- Operations for status display and control
  - Remote panel
    + Display of the status of the LEDs on the panel
    + Display of the status of the mode switch
    + Message on the panel (referred to as a remote panel message)
    + Log display

      Hardware error log, power log, and remote panel message history can be checked.
    + Switch operations (except mode switch)

      The server can be turned on or off or reset, and output of an OS dump can be requested.

      To be able to perform switch operations, set an appropriate mode and log in to XSCF with root-level authority.
    + Help

  - Display of server status
    + Status display by unit
    + Help

- Logs
  - Error log
  - Power log
  - Remote panel message history

- Other features
  - Changing of the password

    Allows you to change the password assigned to an XSCF account used to log in to XSCF. For the restrictions on the password, see "Chapter2 Setting Up XSCF".

  - Display of access status

    The logins to XSCF Web function pages can be checked.

Next: "Chapter6 How to Use the XSCF Command Shell"

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Chapter 6 How to Use the XSCF Command Shell

This chapter explains how to use the XSCF command shell.

This chapter has the following contents.

Contents:

6.1 Overview of XSCF Command Shell 6-2
6.2 Login to XSCF User Account 6-4
6.3 Server Status and Control Commands 6-7
6.4 XSCF Log View Command 6-16
6.5 XSCF Server Configuration Information Command 6-24
6.6 Other XSCF Commands 6-28
6.7 XSCF Shell Error Messages 6-32

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6.1 Overview of XSCF Command Shell

When XSCF commands are executed on the XSCF console, the server status is displayed and control and configuration information related to server operation can be viewed. These XSCF functions and types of information are also available on Web pages displayed with the XSCF Web function.

When a registered user uses the XSCF console but cannot use the XSCF Web function, the XSCF commands are effective.

Use the XSCF commands at the XSCF shell prompt (SCF>), which is displayed after login to the user account for XSCF (XSCF account hereinafter).

This chapter explains how to log in to the XSCF account, how to use commands, and the command errors that can occur.

The following table briefly describes each XSCF shell command.

Table 6-1 XSCF commands

Command	User authority	Description
env-monitor	r, o	Displays the status of the hardware for items such as temperature, CPU state, and power.
net-status	r, o	Displays the status of the SCF-LAN network for items such as connection state and data transfer rate.
nodeled	r, o	Displays the state of each front panel and back panel LED of the server and controls the action of the CHECK LED (blinking, turning it on and off).
show-status	r, o	Displays the hardware status.
show-mail-report	r, o	Displays the information of XSCF Mail Administration.
show-remcs	r, o	Displays the information of REMCS Environment Setting via XSCF.
show-console-device	r, o	Displays whether console output is controlled by the serial port (tty-a) or the SCF-LAN port.
set-console-device	r	Set the output destination of the standard console to the serial port (tty-a).
who	r, o	who is on the XSCF system.
show-connections	r, o	Display network connections to XSCF
hangup	r	Kill network connections to XSCF
xir	r	Resets the server CPU.
shutdown	r	Shuts down the server.
por	r	Performs a system reset for the server.
request	r	Initiates an OS dump.
power-off	r	Powers off the server.
power-on	r	Powers on the server.
show-error-logs	r, o	Displays summary of errors and information detected by XSCF and OBP.
show-power-logs	r, o	Displays information about the server, such as power-on, power-off, and reset information.
show-event-logs	r, o	Displays the server event log.
show-console-logs	r, o	Displays logging information, which is output to the server console.
show-access-logs	r, o	Displays information about accesses to the XSCF Web function pages.
thermal-history	r, o	Displays the temperature history of the server.
show-ipl-logs	r, o	Displays information about server IPL messages.
show-panic-logs	r, o	Displays the logging information recorded for a panic.
date	r, o	Displays the current date and time.
rci-config	r, o	Displays the RCI configuration information.
show-config	r, o	Displays the system configuration information for the server.

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lan-config	r, o	Displays information about the XSCF LAN configuration.
send-break	r	The break signal is issued to the server.
exit	r, o	Exits the current XSCF shell.
help	r, o	Displays a list of available XSCF shell commands.
show-shell-command	r, o	Displays a login keyword that can move to the XSCF shell terminal from the Standard console.
set-shell-command	r	Changes a login keyword that can move to the XSCF shell terminal from the Standard console.
logtest	r	Generate a test error and get the test logs.
version	r, o	Displays the firmware versions of the XSCF and OBP.

r: root, o: others

Note:

There are two user authority levels, which are explained below. For information about setting the user authority, see "Chapter2 Setting Up XSCF".

- root: Root-level authority. All XSCF shell commands can be used.
- others: Authority other than root level. Only some of the XSCF shell commands can be used.

Next: 6.2 Login to XSCF User Account

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6.2 Login to XSCF User Account

This section explains how to log in to the XSCF account. The available methods are to log in using telnet or SSH from the SCF-LAN port and to log in from the serial port (tty-a). Each method is described below.

Before login

Note the following before login:

- For information about registering or adding an account, see "Chapter2 Setting Up XSCF".
- When the shell has not been accessed for some time after login, XSCF automatically terminates the shell. The default timeout period is 10 minutes. The timeout period can be specified. For information about setting the timeout period, see "Chapter2 Setting Up XSCF".
- For a single server, since no more than two terminals can be connected at the same time to the XSCF shell through the serial port (tty-a) and the SCF-LAN port, no more than two users can operate the XSCF shell at the same time. For information about the type of console connection, see "Chapter 3 Connecting XSCF or Server".
- For information about XSCF operation when login fails, see "Chapter5 How to Use the XSCF Web Function".

Operation from a terminal connected to the serial port (tty-a)

The following explains how to log in from a terminal connected to the serial port (tty-a).

1. From the console immediately after the port connection, input the keyword (~.) (tilde | period: it's default value.) to enter the XSCF console.
2. After having entered the XSCF console, input the user ID and password that have been registered from the Machine Administration Menu.

After login to the account, the XSCF shell prompt (SCF>) appears, so use the XSCF commands. The following is an example of command execution.

```
~.              <= This line is an input operation. Not displayed.
SCF Shell

login:root
Password:
SCF Version xxxxxxxx
ALL RIGHTS RESERVED, COPYRIGHT (C) FUJITSU LIMITED 2003
[11.22.333.444]
SCF>
```

Operation for connecting via the SCF-LAN (telnet)

The following explains how to log in to the XSCF shell using the SCF-LAN (telnet).

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1. Specify the IP address and port number 8010 for the XSCF shell and execute telnet via the SCF-LAN.
2. On the XSCF console, enter the user ID and password.

After login to the account, the XSCF shell prompt (SCF>) appears, and XSCF commands can be entered.

Use lan-config command to display the configuration information of the SCF-LAN.

The following is an example of command execution.

```
SCF Shell

login:root
Password:
SCF Version xxxxxxxx
ALL RIGHTS RESERVED, COPYRIGHT (C) FUJITSU LIMITED 2003
[11.22.333.444]
SCF>
```

Operation for connecting via the SCF-LAN (SSH)

The following explains how to log in to the XSCF shell using the SCF-LAN (SSH).

1. Specify the IP address and port number 8810 for the XSCF shell and execute SSH via the SCF-LAN.
2. On the XSCF console, enter the user ID and password.

After login to the account, the XSCF shell prompt (SCF>) appears, and XSCF commands can be entered.

Use lan-config command to display the configuration information of the SCF-LAN.

Error Messages Report Function(Serial Port Only)

In case any Alarm or Warning level fault has been detected, error messages are displayed following to typing XSCF Shell Keyword on the XSCF seraial port or to log in XSCF shell on 8010. This error messages are displayed on serail port only when the mode switch on the front panel is placed to maintenance position, this is NOT applied to error message on XSCF 8010 port.

```
*** XSCF Parts Error Infomation ***
Parts     Error Message
---------+-----------------------------------------------
CPU#0     CPUDDC#0 1.09V(expect xx.xxV)

SCF Shell

login:
```

Note:

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These messages are displayed even when no XSCF accounts are registered. In case you have faced any problem, and you cannot login to XSCF due to any reason, such as no XSCF account, fix the problem with refering this message.

Next: 6.3 Server Status and Control Commands

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6.3 Server Status and Control Commands

The following XSCF commands enable the status of the server to be displayed and the server to be operated and controlled:

- env-monitor
- net-status
- nodeled
- show-status
- show-console-device
- set-console-device
- xir
- por
- shutdown
- request
- power-off
- power-on

env-monitor *value*

The env-monitor command is used to view the server status. For example, it can be used to display the temperature, CPU state, and power supply state. When no options are specified, major information is displayed.

The following is an example of command execution.

```
SCF> env-monitor
-------------------------
INLET Temperature      28C
-------------------------
CPU
No.  Temp Status   DDC-Voltage DDC-Status
---  ---- -------- ----------- ----------
#0:   31C O.K        1.31V      O.K
#1:   30C O.K        1.33V      O.K
-------------------------
System Board
SB: Temperature0   36C   Temperature1   27C
SB  12V: 11.99V  SB-12V: -12.26V  SB5V:    5.06V
SB 3.3V:  3.34V  SB2.5V:   2.65V  SB1.8V:  1.77V
SB1.25V:  1.32V
-------------------------
FAN
FAN#0: rotate state  3660rpm
FAN#1: rotate state  3960rpm
FAN#2: rotate state  3720rpm
FAN#3: rotate state  3960rpm
FAN#4: rotate state  4080rpm
FAN#5: rotate state  3720rpm
-------------------------
PSU
PSU#0: Mount   Status:Alarm
```


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```
PSU#1: Mount   Status:O.K
------------------------
Mode Switch Status---[Lock]
SCF>
```

The following table describes the options that can be specified.

Table 6-2 env-monitor command options

Option *value*	**Description**
(no option)	Displays major status of the machine.
network	Displays the GatewayIP, Subnetmask, Host name, IPaddress, and SCF MacAddress information.
cpu*n* (*n* =0.1..3)	Displays the CPU status, DDC status, running days, error messages, CPU temperature, CPU frequency, and DDC 1.2-V voltage value for each CPU. When *n* is omitted, information for all CPUs is displayed.
sb	Displays the SysBoard status, running days, error messages, SB temperature, DDC 1.25-V voltage value, system clock frequency, and SB type information.
panel	Displays the status, running days, and error messages for the operator panel.
pcibd	Displays the PCI board status, running days, and error messages.
scsibp*n* (*n* =0.1)	Displays the status, running days, and error messages for each SCSI board.
psu*n* (*n* =0.1.2)	Displays the status, running days, and error messages for each PSU.
slot*n* (*n* =0.1..15)	Displays the status and error messages for each slot (DIMM).
fan*n* (*n* =0.1..7)	Displays the status, rotation speed (rpm), rotation status (high/low), and error messages for each fan.
ddca*n* (*n* =0)	Displays the DDC-A status and 1.8 V voltage value.
ddcb*n* (*n* =0)	Displays the DDC-B status and 2.5 V voltage value.
inlet	Displays the environment information status and inlet temperature.
power-control	Displays whether the scheduled power control, APCS, is enabled and the time that is set.

net-status

The net-status command is used to view the SCF-LAN network status. For example, it can be used to display the connection state, Ethernet data transfer rate, and Number of Send-Receive packet.

The following is an example of command execution.

```
SCF> net-status
*** SCF-LAN Network Status ***
     Connection             : online
     Speed                  : 100Mbps (half duplex)
     Send    Packets        : 2818
     Receive Packets        : 23983
```


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```
    Receive Error Packets    : 0
    Overruns                 : 0
SCF>
```

nodeled [-led check | all] {[-mode on | blink | off] | [-status]}

The nodeled command is used to display the status of each LED on the front and back panel of the server. In addition, you can make CHECK LED turn on or blink in order to locate the target system. After found the location, you can free the state of CHECK LED by this command.

When no option is specified, the command shows the status of all LEDs, (POWER LED, ONLINE LED, CHECK LED, and SCF Ready LED).

In the addition, as described above, this command can be used to locate the target system. For example, when more than one same type of system is installed in the same area, it may be difficult to find out the target system. By specifying -mode option to this command, you can change the state of CHECK LED to specified state. With help of CHECK LED, you may be able to locate the target system, easier. After found location, cancel the forced state of CHECK LED by specifying -mode off option.

Note that the -mode and -status options are mutually exclusive.

For more information about the panel LEDs, see the *User's Manual* for the server.

The following is an example of executing a command that first causes the CHECK LED to blink and then cancels the action.

```
SCF> nodeled -status
   CHECK(Amber) ------ OFF
   CHECK(Rear) ------- OFF
SCF> nodeled -mode blink -led check
SCF> nodeled -status
   CHECK(Amber) ------ BLINK(Guide LED)
   CHECK(Rear) ------- BLINK(Guide LED)
SCF> nodeled -mode off -led check
SCF> nodeled -status
   CHECK(Amber) ------ OFF
   CHECK(Rear) ------- OFF
SCF> nodeled -status -led all
 === FRONT LED ==============
   POWER(Green) ------ OFF
   ONLINE(Green) ----- OFF
   CHECK(Amber) ------ OFF
 === REAR LED ===============
   SCF-READY(Green) -- ON
   CHECK(Amber) ------ OFF
SCF>
```

The following table describes the options that can be specified.

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Table 6-3 nodeled command options

Option	Description
No options specified	The status of all LEDs is displayed.
-led *Value1*	Optional. Specify either of the following LED types for *Value1*: — check: The command applies to the CHECK LED only. — all: The command applies to all LEDs. If this option is not specified but the -mode or -status option is specified, the command applies only to the CHECK LED. When -led is specified, be sure to specify either check or all. In addition, be sure to specify either the -mode or -status option.
-mode *Value2*	Optional. However, if -led is specified and this option is not specified, be sure to specify the -status option. This option is used to turn on or off CHECK LED or to cancel control. Specify the following one of the following controls for *Value2*: — on: Turns on the CHECK LED. — blink: Causes the CHECK LED to blink. — off: Cancels the specified CHECK LED control and restores the CHECK LED to its original state. When -mode is specified, on, blink, or off must be specified.
-status	Optional. However, if -led is specified and this option is not specified, be sure to specify the -mode option. This option enables the status of the LED specified by *Value1* to be displayed. When -led is not specified, the status of CHECK LED is displayed.

Note:

When the error remains in the server, the CHECK LED keeps blinking even if you cancel the specified CHECK LED by this command.

show-status

show-status command provides fault factors to blink CHECK LED except blinked by nodeled command.

The following is an example of command execution.

```
*** XSCF Parts Error Information ***
Parts     Error Message
---------+-------------------------------------------------
CPU#0     Uncorrec. error(Internal)(008f024f)
SB        Uncorrec. error(Marked)(008f021d)
```

show-mail-report

The show-mail-report command is used to view the information of XSCF Mail Administration. For example, it can be used to display whether the mail report function is valid or invalid, Mail destination address, Sender address, SMTP server name, POP authentication server, etc.

The following is an example of command execution.

```
SCF> show-mail-report
**** Mail Report configuration ****
 mail                    : ENABLE
 status                  : ACTIVE
 E-Mail address [to]     : mail-address@domain-name.co.jp
```


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```
E-Mail address [from]   : root@domain-name.co.jp
smtp [1] server         : smtp-server
 pop [1] authentication : VALID
 pop [1] server         : pop-server
 pop [1] user           : pop-user-name
 pop [1] wait time      : 300 [msec]
smtp [2] server         : ---
 pop [2] authentication : ---
 pop [2] server         : ---
 pop [2] user           : ---
 pop [2] wait time      : ---
name server             : 192.168.1.1
```

show-remcs

The show-remcs command is used to view the information of REMCS Environment Setting via XSCF. For example, it can be used to display whether the REMCS report function via XSCF is valid or invalid, Model type name, Sender address, SMTP server name, POP authentication server, etc.

The following is an example of command execution.

```
SCF> show-remcs
**** REMCS configuration ****
 REMCS                  : ENABLE
 status                 : ACTIVE
 remcs test fault code  : 00
 remcs version          : V06L01E0001
 connection model       : INTERNET
 machine id             : 00PRIMEPWR#P##PW0LBS111###MH345678######
 message code           : 00
 E-Mail address [from]  : mail-address@domain-name.co.jp
 smtp [1] server        : smtp-server
  pop [1] server        : pop-server
  pop [1] user          : user-name
  pop [1] wait time     : 2000 [msec]
 smtp [2] server        : ---
  pop [2] server        : ---
  pop [2] user          : ---
  pop [2] wait time     : ---
 name server            : 192.168.1.1
```

show-console-device

The show-console-device command on the XSCF console is used to display whether the current destination of the server OS console is on the SCF-LAN or is the serial port (tty-a).

The following is an example of command execution.

```
SCF> show-console-device
TTY-A Port : serial
SCF>
```

Note:

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We strongly recommend that you should set the input-output destination of the OS console to the tty-a (Especially, when you use the graphic card). For more detail about changing the console to "tty-a", see "Chapter3 Connecting XSCF or Server".

set-console-device [serial]

The set-console-device command in the XSCF console is used to change the current destination of the Standard console (server OS console) to **serial port (tty-a)**. Using this command without the option results in an error. The required authority for this command is root level.

The following is an example of executing the command to set the serial port (tty-a).

```
SCF> show-console-device
TTY-A Port: lan
SCF> set-console-device serial
SCF> show-console-device
TTY-A Port: serial
SCF>
```

The following table describes the options that can be specified.

Table 6-4 set-console-device command options

Option	Description
serial	Sets the console destination to serial port (tty-a).

Note

When you select which interface, serial port(tty-a) or SCF-LAN port is used as Standard console(OS console), please set ports by "Console Administration" option of the Machine Administration Menu or scfconsole (1M) command (*) of the Machine Administration function.

If the Machine Administration function cannot be used or the console cannot be used via LAN port, please use the console you can access from PC which is directly connected to XSCF by serial port (tty-a). Then login to the XSCF Shell and set the console to "serial" with this command.

* The command is at ESF2.5.1 or later. For detail about the command, see the *Enhanced Support Facility User's Guide for Machine Administration* for the ESF.

Cautions for use

If the the Standard Console has been set to serial port(tty-a) from the Machine Administration Menu or on the command line of the Machine Administration function, the Standard Console can NOT be set to LAN port using this command. Please use the Machine Administration Menu to set the Standard Console to LAN port.

who

The who command can list the user's name, terminal line and login time.

The following is an example of command execution.

```
SCF> who
```


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```
plato    Serial(RS232C)    2002/12/03 02:20:14  ---
root     Telnet(port 8010) 2002/12/03 02:13:27  11.22.333.444
SCF>
```

show-connections

The show-connections command is used to view the XSCF port number and client information such as IP address and port number.

The following is an example of command execution.

```
SCF> show-connections
XSCF Telnet/SSH Active Connections
Local Port    Foreign Address
-----------+----------------------
     22     10.12.123.4:54456
   8810     10.12.123.4:54508
SCF>
```

hangup

The hangup command is used to kill the connections to XSCF. The required authority for this command is root level.

The following table describes the options that can be specified.

Table 6-5 hangup command options

Option	Description
22	Disconnect port 22, SSH RW.
23	Disconnect port 23, telnet RW.
8010	Disconnect port 8010, telnet XSCF shell port.
8011	Disconnect all of port 8011, telnet RO port. (If two users are using, both are disconnected.)
8810	Disconnect port 8810, SSH XSCF shell port.
8811	Disconnect port 8811, SSH RO port.
8812	Disconnect port 8812, SSH RO port.

xir

The xir command generates an externally initiated reset (XIR) of the server. The server OS console prompt changes to ***ok***. The required authority for this command is root level.

Note

Please use this command only when you cannot stop your system in normal procedure due to any software or hardware trouble.

Do NOT use this command on normal working system. For normal working system, please use "shutdown" command.

WARNING

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File system could be damaged by executing this command during OS is working.

shutdown

The shutdown command generates to shut down the server. This command is ignored when executed during power-off or a reset. The required authority for this command is root level.

por

The por command is used to perform an immediate system reset of the server. The required authority for this command is root level.

Note

Please use this command only when you cannot stop your system in normal procedure due to any software or hardware trouble.

Do NOT use this command on normal working system. For normal working system, please use "shutdown" command.

request

The request command is used to send a panic instruction to the OS. The operation performed is the same at that performed when the request switch on the operating panel or remote panel is pressed. This command is ignored when executed during power-off, a reset, or shutdown. The required authority for this command is root level. For information about an OS dump, see the *Enhanced Support Facility User's Guide for Machine Administration* for the ESF.

The following is an example of command execution.

```
SCF> request
SCF>
```

Note

"request" command causes the system panic to collect the memory dump. Purpose of this command is only for maintenance, such as, to investigate hangup of system. Therefore, please do NOT execute this command, except when it is surely necessary.

WARNING

File system could be damaged by executing this command during OS is working.

power-off

The power-off command is used to power off the server. This command is ignored if used when server power is off. Note that this command does not affect the power, supplying to XSCF. The required authority for this command is root level.

Note

Please use this command only when you cannot stop your system in normal procedure due to

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any software or hardware trouble.

Do NOT use this command on normal working system. For normal working system, please use "shutdown" command.

WARNING

File system could be damaged by executing this command during OS is working.

power-on

The power-on command is used to power on the server. This command is ignored if used when the server power is on. Note that the command does not affect the XSCF power supply. The required authority for this command is root level.

Next: 6.4 XSCF Log View Command

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6.4 XSCF Log View Command

Use the following XSCF commands to check the server operation from console logs, temperature history, and error logs:

- show-error-logs
- show-power-logs
- show-event-logs
- show-console-logs
- show-access-logs
- thermal-history
- show-device-records
- show-ipl-logs
- show-panic-logs

show-error-logs

The show-error-logs command is used to view the summary of errors or notification that have been detected by XSCF and OBP. The log information can be viewed when a system error such as a reset error, failed OS startup, error indicated by blinking of CHECK LED on the front or back panel of the server, or slow down of process on Solaris OS has occurred. The same error log information is also retained by the Machine Administration Menu. For the logging information retained by the Machine Administration Menu, see the *Enhanced Support Facility User's Guide for Machine Administration* for the ESF. The maximum number of log entries is 32.

The following table explains the items recorded in error logs.

Table 6-6 Items displayed by the show-error-logs command

Component	Description
No/Error Count	"No" indicates the sequence number assigned to the error to be displayed. "ErrorCount" indicates the total number of errors to be displayed.
Date	Indicates the time (local time) that the error occurred.
SysDamage	The system fault level of the error. The levels are ALARM, WARNING, and NOTICE.
FaultDetect	Indicates the hardware where the error was detected.
FaultCode	A unique error code for identifying the error
DetailInfo	Log message
ReplaceParts	Replacement part and the part number
Syslog msg	System message output to the console when the error occurred. Indicates the error category.
BinData	Binary error data. When a detailed analysis is necessary, Fujitsu engineer uses it.

For a list of error logs, see "Appendix B XSCF Log Information".

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The following is an example of command execution.

```
SCF> show-error-logs
***** No.01/32
 Date         = 2002/08/31 08:25:39
 SysDamage    = NOTICE
 FaultDetect  = SCF
 FaultCode    = 430102FF
 DetailInfo   = FAN speed low CAUSE: temperature lower
 ReplaceParts = ---
 Syslog msg   = Notification
    00831810 430102FF 02083108 2539FFFF
    494E4C45 54207468 65726D61 6C206C6F
    77204641 4E207370 65656420 6C6F7700
    171A0000 00000000 00000000 00000000
:
:
SCF>
```

Note:
Some of the errors detected by the OS may not be displayed.

show-power-logs

The show-power-logs command is used to view all information in the power log, including any server power-on, power-off, or reset detected by XSCF and POST/OBP. The information can be viewed for use in investigating circumstances of use when a system error has occurred. The same power log information is retained by the Machine Administration Menu. For the logging information retained by the Machine Administration Menu, see the *Enhanced Support Facility User's Guide for Machine Administration* for the ESF. The maximum number of log entries is 32.

The following shows the format of a line in the power log.

```
$DATE   $TIME   $TYPE   $FACTOR   $DETAIL   $MSW
```

- DATE : Date on which the log entry was recorded
- TIME : Time (local time) at which the entry was recorded
- TYPE : The type of the power event, such as power-on or reset, and the code
- FACTOR : Hardware that instructed the power event and the code
- DETAIL : Details in binary
- MSW : Mode set by the mode switch on the operating panel
  - M : MAINTENANCE mode
  - U : UNLOCK mode
  - L : LOCK mode

For a list of power logs and a fuller explanation, see "Appendix B XSCF Log Information".
The following is an example of command execution.

```
SCF> show-power-logs
DATE       TIME     TYPE              FACTOR      DETAIL    MSW
----------+--------+-----------------+-----------+---------+----
```


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```
2002/08/07 15:02:58 20:Power-on       80:UPS      01 000000  M
2002/08/07 15:03:03 3f:Reset-Release  00:---      00 000000  M
2002/08/07 15:47:54 10:SCF Reset      00:---      03 000000  -
2002/08/07 15:48:08 50:PSU-OFF        00:---      00 000000  M
2002/08/07 15:50:58 01:PSU-ON         00:---      00 000000  -
2002/08/07 15:51:00 20:Power-on       80:UPS      01 000000  M
2002/08/07 15:53:36 20:Power-on       40:TTY      00 000000  L
2002/08/07 15:55:50 42:Power-off      40:TTY      00 000000  L
2002/08/07 15:56:14 20:Power-on       40:TTY      00 000000  L
2002/08/07 15:56:19 3f:Reset-Release  00:---      00 000000  U
2002/08/07 16:09:21 50:PSU-OFF        00:---      00 000000  U
2002/08/07 16:10:50 20:Power-on       80:UPS      01 000000  M
2002/08/07 16:10:55 3f:Reset-Release  00:---      00 000000  M
2002/08/07 16:22:26 42:Power-off      40:TTY      00 000000  M
2002/08/07 16:22:36 20:Power-on       40:TTY      00 000000  M
2002/08/07 16:22:39 20:Power-on       40:TTY      00 000000  M
2002/08/07 16:22:44 3f:Reset-Release  00:---      00 000000  M
2002/08/07 16:48:59 42:Power-off      40:TTY      00 000000  U
2002/08/07 16:54:34 20:Power-on       40:TTY      00 000000  U
2002/08/07 16:54:39 3f:Reset-Release  00:---      00 000000  L
2002/08/07 17:00:18 42:Power-off      40:TTY      00 000000  L
SCF>
```

show-event-logs

The show-event-logs command is used to view all event logs that have been created on the server, such as those recording operator events and the reporting of events from the OS. The information can be viewed to determine the operating status of the server as an aid to investigating a system error and to changing the system configuration. The same event log information is retained by the Machine Administration Menu. For the logging information retained by the Machine Administration Menu, see the *Enhanced Support Facility User's Guide for Machine Administration* for the ESF. The maximum number of log entries is 256.

The following shows the format of a line in the power log.

```
$DATE  $TIME  $MSW  $Address  $FACTOR  $DETAIL
```

- DATE : Date on which the log entry was recorded
- TIME : Time (local time) at which the entry was recorded
- MSW : Mode switch setting on the operating panel
  - M : MAINTENANCE mode
  - U : UNLOCK mode
  - L : LOCK mode
- Address : Device address
- FACTOR : Event category and code
- DETAIL : Details in binary

For the list of event logs and meanings, see "Appendix B XSCF Log Information".

The following is an example of command execution.

```
SCF> show-event-logs
DATE      TIME     MSW  Address  FACTOR     DETAIL
```


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```
--------+--------+---+--------+---------+--------------------------------
2002/08/08 11:43:59 M   000F7F00 60:SysInfo 00000000 00000000 00000000 00000000
2002/08/08 11:43:59 M   000F7F00 04:ExtInfo 00000000 00000000 00000000 00000000
SCF>
```

show-console-logs [-d | -t] [-s *value*]

The show-console-logs command is used to view the console output logs on the server console. A log contains the logging data output from the OS to the console and can be used for investigating usage conditions for system error or other problem. The latest 16 KB of logging information can be viewed.

The following is an example of command execution.

```
SCF> show-console-logs
 100.00000000
0>      Probing U2P#3(0x83) at 106.00000000
0>      U2P Registers Test
0>      IO0_Status= 01000000(MCOQ=2), UPA_Config=00000002
0>      Testing U2P port_id=80
0>      IO3_Status= 01000000(MCOQ=2), UPA_Config=00000002
0>      Testing U2P port_id=83
0>      U2P Interrupts Test
0>      Testing U2P#3(portid=83,inr=20ee)
0>      Testing U2P#3(portid=83,inr=20ef)
0>      Testing U2P#3(portid=83,inr=20f0)
SU,sppex
Omitted
 4x SPARC64 V   , No Keyboard
OpenBoot 3.1.0-16, 16384 MB memory installed
Ethernet address 0:e0:0:c4:80:3, Host ID: 00000000.
SCF>
```

Table 6-7 show-console-logs command options

Description	Description
-d –t	-d: Display the log with logged date. -t: Display the log with logged time. Ommitting this opiton, display the log only.
-s	Display the log of specified size. *Value* has to be designated in hexadecimal format. Ommitting this option, display 8KB size log. Maximum 16KB can be

show-access-logs

The show-access-logs command is used to view the logs recording access to the XSCF Web function pages, XSCF shell, or any other XSCF function. Any access to XSCF, such as, a user check system status on XSCF web, or a user uses XSCF shell via serial port (tty-a) or LAN (telnet) or LAN (SSH), is logged. This information can be used for security purposes to investigate usage conditions for an unauthorized access and to investigate system errors. The maximum number of log entries is 42.

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The following shows the format of a line in the access log.

$DATE $TIME $UserID $TYPE $IP Address

- DATE : Date on which a network port such as the XSCF Web function or SCF-LAN port was accessed
- TIME : Time (local time) when s network port such as the XSCF Web function or SCF-LAN port was accessed
- User ID
- Accessed port ID
- User IP address

The following is an example of command execution.

```
SCF> show-access-logs
Date       TIME     ID     TYPE              IP address
---------+---------+------+-----------------+---------------
2002/09/10 09:18:52 user01 Telnet(port 8010) 11.22.33.4
2002/09/12 09:18:52 guest  Telnet(port 8010) 123.123.123.123
2002/09/14 09:18:52 root   Serial(RS232C)    ---
2002/09/15 09:18:52 user01 SSL(Port 443)     11.22.33.4
SCF>
```

Note:
The TYPE values include telnet, SSH, SNMP, RS232C serial, SSL, and http.

thermal-history [-g] *value*

The thermal-history command is used to view a history of the ambient server temperature, CPU temperature, and temperature of the system board. When the -g option is specified, the history is represented graphically. When no options are specified, all temperature histories are listed in a table. To display the temperature history for each device, enter the specification option in the table given below.

The logged information can be remains for about one day. Older information will be expired. Therefore, you can view the log information of latest one day.

The information can be used for investigating the server environment for a system error or other problem.

The following shows the format of a line in the temperature history.

$TIME $Temperature(Celsius, minutely 10 or 60)

- TIME : Time that the temperature was measured
- Temperature : Indicates the temperature (Celsius) every 10 minutes or 1 hour. For a graphic representation, the interval is every 30 minutes.

The following are examples of command execution.

```
SCF>thermal-history

Thermal History [ Celsius]
_GMT__|_INLET__CPU0_CPU1_CPU2_CPU3__SB0__SB1
```


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```
01:39 |    027  OFF  ---  ---  ---  033  028
02:39 |    027  OFF  ---  ---  ---  033  028
03:39 |    027  030  ---  ---  ---  033  027
04:39 |    027  032  ---  ---  ---  035  027
05:39 |    027  033  ---  ---  ---  036  027
06:39 |    027  035  ---  ---  ---  037  027
07:39 |    027  036  ---  ---  ---  037  027
08:39 |    027  037  ---  ---  ---  038  028
09:39 |    027  037  ---  ---  ---  038  028
10:39 |    027  037  ---  ---  ---  038  027
11:39 |    027  035  ---  ---  ---  036  026
SCF>

SCF>thermal-history cpu0
Thermal History cpu0[ Celsius]
_GMT__|___00___10___20___30___40___50[ MIN]
01:10 |  ---  OFF  OFF  OFF  OFF  OFF
02:00 |  OFF  OFF  029  030  030  030
03:00 |  030  030  031  031  031  031
04:00 |  032  032  032  032  033  033
05:00 |  033  033  034  034  034  035
06:00 |  035  035  035  035  036  036
07:00 |  036  036  036  036  036  036
08:00 |  037  037  037  037  037  037
09:00 |  037  037  037  037  037  037
10:00 |  037  037  037  037  037  036
11:00 |  036  035  035  035  034  034
SCF>
```

The following table describes the options that can be specified.

Table 6-8 thermal-history command options

Option	Description
-g	Optional. The temperature history information is represented graphically. If this option is not specified, the information is presented in table form. When -g is specified but *value* is not specified, the command results in an error.
Options for *value*	
inlet	Displays the inlet.
cpu*n* (*n* =0,1,,3)	Displays the temperature history of the CPUs. The maximum specification is cpu3.
sb-sensor*n* (*n* =0,1)	Displays the temperature history of SysBoard. Up to two locations can be specified.

Note:
If the power plug is disconnected, all temperature history information will be lost.

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show-ipl-logs [-d | -t] [-f | -b] [-s *value*]

The show-ipl-logs command is used to view the message of latest IPL.
This information can be used to investigate the server status when the system was started.
The following is an example of command execution.

```
SCF> show-ipl-logs
0>Flash/SRAM Test
0>      Flash Memory check sum Test
0>      FROM#0 checksum = 110a8bf4
0>      FROM#1 checksum = 112e489f
0>      SRAM Data Line Test
0>      SRAM Addr Line Test
0>      SRAM Data Test
0>      SRAM Init Test
0>SC Test
0>      SC init
0>SCF Test
0>      SCF Test
0>      CPU Status Test
:
:
:
OpenBoot 3.1.0-18, 1024 MB memory installed
Ethernet address 0:ee:0:dd:88:22, Host ID: 11223344.
SCF Version: 0.1.0000



board
RCI is not configured
{0} ok
SCF>
```

Table 6-9 show-ipl-logs command options

Description	Description
-d –t	-d: Display the log with logged date. -t: Display the log with logged time. Ommitting this opiton, display the log only.
-f –b	-f: Display the log starting from the latest. -b: Display the log starting from the oldest. Ommitting this opiton, display the log starting from the latest.
-s	Display the log of specified size. *Value* has to be designated in hexadecimal format. Ommitting this option, display 8KB size log. Maximum 16KB can be

show-panic-logs [-d | -t] [-f | -b] [-s *value*]

The show-panic-logs command is used to view the logging information of the last panic.

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The following is an example of command execution.

```
SCF> show-panic-logs

panic[cpu0]/thread=2a10001fd20: memory dumping due to pressing REQUEST switch.

000002a10001bde0 FJSVpanel:panel_intr+58 (30000d356c0, 30000b85998, 1, 3,
30000d39e08, 10078834)
  %l0-3: 0000030000b859a0 0000000000009b44 0000000000000000 0000030000d39e14
  %l4-7: 0000030000b85938 000003000185bef8 0000000000000000 000003000185bf20
000002a10001be90 pcipsy:pci_intr_wrapper+70 (104a8ebc, 20e5, 1, 30000ebefd0,
30001859d68, 3000182fe10)
  %l0-3: 00000000102be150 0000000000000000 0000000000000000 0000030000d4fac0
  %l4-7: 0000030000b85938 000003000185bef8 0000000000000000 000003000185bf20
000002a10001bf50 unix:current_thread+44 (0, ffffffffffffffff, 0, 30001830aa0,
2a10001fd20, 0)
  %l0-3: 00000000100073dc 000002a10001f061 000000000000000f 000002a10001bf50
  %l4-7: 00000000000000b0 0000000010415c08 000000000000000b 000002a10001f910
000002a10001f9b0 unix:disp_getwork+40 (104244d0, 0, 10425478, 1042d590, 0, 0)
  %l0-3: 0000004414001603 0000000000000016 000000000000000a 0000000010009b44
  %l4-7: 00000000ff31c424 0000000000000000 0000000000000000 000002a10001f9c0
000002a10001fa60 unix:idle+a4 (0, 0, 0, 104244d0, 1, 0)
  %l0-3: 000000001004616c 0000000000000100 0000000000010000 000002a10010bd20
  %l4-7: 0000030001835fc8 0000030000074000 0000030001835ee0 0000030001835ed0

syncing file systems... 3 done
dumping to /dev/dsk/c0t0d0s1, offset 107610112
100% done: 36120 pages dumped, compression ratio 8.47, dump succeeded
rebooting...
Saving eeprom ... done
Resetting ...
SCF>
```

Table 6-10 show-panic-logs command options

Description	Description
-d –t	-d: Display the log with logged date. -t: Display the log with logged time. Ommitting this opiton, display the log only.
-f –b	-f: Display the log starting from the latest. -b: Display the log starting from the oldest. Ommitting this opiton, display the log starting from the latest.
-s	Display the log of specified size. *Value* has to be designated in hexadecimal format. Ommitting this option, display 8KB size log. Maximum 16KB can be

Note:

This log can be shown only when OS console port is set to the SCF-LAN port or the serial port(tty-a).

Next: 6.5 XSCF Server Configuration Information Command

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6.5 XSCF Server Configuration Information Command

Use the following XSCF shell commands to view the server configuration information (for example, number of CPUs and memory capacity).

- date
- rci-config
- show-config
- lan-config

date

The date command is used to display the current time and date. The time cannot be specified.

The following shows the format of one line.

yyyy/mm/dd HH:MM:SS TimeZoneName

- yyyy : Year
- mm : Month
- dd : Day in the month
- HH : Hour (24-hour system)
- MM : Minute
- SS : Second
- TimeZoneName : Display the name of the local time zone (Maximum 8 charactors)

The following is an example of command execution.

```
SCF> date
2002/08/13 11:41:40 JST
SCF>
```

Note:

The date and time displayed by the date command are local time.

Time cannot be set from the XSCF shell. Please use and set the command of Solaris OS such as Date. When the utility of Solaris OS which controls the time such as NTP is used, the calendar timer of XSCF receives the influence. Please refer to the manual of relating Solaris OS for details.

rci-config

The rci-config command is used to view the RCI configuration information. You may want to check the status of RCI by this command when, for example, you are setting up the system or you change the configuration of system. For details of the RCI configuration information, see "Chapter 3 Connecting XSCF to Terminal". The Machine Administration Menu also displays the RCI network list information. For the RCI configuration information displayed by the Machine Administration Menu, see the *Enhanced Support Facility User's Guide for Machine Administration* for the ESF.

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The following shows the format of the host address display and of the RCI configuration in the RCI configuration information.

```
HOST
$Address   $Mode   $Status
```

HOST shows the status of the host node in binary.

- Address : Address of the host device
- Mode : Remote power supply control mode on the host
- Status : Status of the device

```
LIST
$address   $status   $device-class   $sub-class
```

LIST lists the nodes in the RCI configuration in binary.

- address : Address of the device
- status : Status of the device
- device-class : Device class
- sub-class : Device subclass

The following is an example of command execution.

```
SCF> rci-config
HOST
 Address:000101FF Mode:20A0 Status:80000000
LIST
 Address  Status Device-Class Sub-Class
 000101FF 99     0001         0A
 000102FF 98     0001         07
 003001FF 90     4000         05
SCF>
```

show-config *value*

The show-config command is used to view the system information, number of server CPUs, memory capacity, part information, and the like. You may want to check the status of the system by this command when, for example, you are setting up the system or you change the configuration of system.

When no option is specified, a synopsis of the configuration information for the device is displayed.

The following is an example of command execution.

```
SCF> show-config
--------------------
Model name       : PWPL-450
Model type       : XXXXXX
Machine Versio n : 12
Sysytem frequency: 220MHz
Version          : 001AA
SB Type          : 0102
-------------------------
```


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```
CPU No.    Frequency Serial-no.
------   ---------- ------------
#0:       1100MHz      P28000010
#1:       1100MHz      P26000001
#2:          ---       ---
#3:          ---       ---
-----------------------
Total Capacity 2048 MB
SLOT  #00- 03   512MB  512MB  ---    ---
SLOT  #04- 07   512MB  512MB  ---    ---
SLOT  #08- 11   ---    ---    ---    ---
SLOT  #12- 15   ---    ---    ---    ---
SCF>
```

The following table describes the options that can be specified.

Table 6-11 show-config command options

Option *value*	**Description**
(no option)	Displays major configuration of the machine.
scf	Displays the XSCF firmware version, RCI version, and server ID.
network	Displays the GatewayIP, Subnetmask, Host name, IPaddress, and SCF MacAddress information.
system	Displays the model name, serial number, name of model type, system clock frequency, SB type information, and system status (includes three bytes of additional information).
cpu*n* (*n* =0.1..3)	Displays the serial number, part number, version, and CPU frequency for each cpu. When *n* is omitted, the information for all cpu is displayed.
sb	Displays the serial number, part number, version, system clock frequency, and SB type information of the SysBoard.
panel	Displays the serial number, part number, and version of the operator panel.
pcibd	Displays the serial number, part number, and version of the PCI board.
pci*n* (*n* =00.01..08)	Displays the information for each PCI slot. *n* is a two-digit number.
scsibp*n* (*n* =0.1)	Displays the serial number, part number, and version of each SCSI board.
disk*n* (*n* =0.1..5)	Displays the vendor, product name, version, and serial number of each disk.
psu*n* (*n* =0.1.2)	Displays the serial number, part number, and version of each PSU.
slot*n* (*n* =0.1..15)	Displays the serial number, part number, version, and capacity of each slot (DIMM).
fan*n* (*n* =0.1..7)	Displays the serial number, part number, and version of each fan.

lan-config

The lan-config command is used to view the current configuration information for the SCF-LAN.

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```
SCF> lan-config
***OS LAN Information ***
Host Name -------------------------[example.com]
MAC Address <Primary LAN> ---------[00 EE 00 CC 88 22]
            <Cluster>     ---------[00 EE 00 CC 88 22]
            <Secondary LAN>--------[00 EE 00 55 88 22]

***SCF LAN Information ***
RW-port   ---------------------- [Enable]
RO-port   ---------------------- [Enable]
SCF-port  ---------------------- [Enable]
Host Name ---------------------- [example1.com]
IP Address ----------------------[11.22.333.44]
Subnet Mask Address -------------[255.255.255.0]
Gateway IP Address --------------[11.22.333.4]
MAC Address <SCF LAN> -----------[00 EE 00 55 00 22]
SCF>
```

Next: 6.6 Other XSCF Commands

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6.6 Other XSCF Commands

Use the following XSCF shell commands to terminate the XSCF shell, view the version information, and perform similar functions.

- send-break
- exit
- help
- show-shell-command
- set-shell-command
- logtest
- version

send-break

The send-break command is used to send a break signal to the server. The server OS console prompt changes to ***ok***.

The required authority for this command is root level.

The following is an example of command execution.

```
SCF> send-break
SCF>
```

Caution:

You cannot enter the OpenBoot environment when the mode switch is set to LOCK.

exit

The exit command is used to terminate the XSCF shell.

The following is an example of command execution.

```
SCF> exit
logout
```

help *value*

The help command is used to display alphabetically a list of shell commands available in the XSCF shell. Detail command information is available when help command is followed by each command name as option.

The following is an example of command execution.

```
SCF> help
  COMMAND             DESCRIPTION
  ------------------------------------------------------------------------------
  date                Show date.
  env-monitor         Show system environment.
  exit                Exit XSCF Shell.
  help                Show help of shell command.
  hangup              Kill XSCF telnet connections.
```


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```
  lan-config          Show LAN configuration.
  net-status          Show SCF-LAN status.
  nodeled             Show and Control Check LED status.
  por                 por,Powrer On Reset.
  power-on            Power on.
  power-off           Power off.
  rci-config          Show RCI configuration.
  request             Panic request.
  send-break          Send Break Signal to TTYA console.
  set-console-device  Set console device [serial | lan]
  set-shell-command   Change shell keyword.
  show-access-logs    Show the access logs.
  show-config         Show system configuration.
  show-connections    Show XSCF connection status.
  show-console-device Show console device setting as TTYA Port.
  show-console-logs   Show console messages.
  show-error-logs     Show error logs.
  show-event-logs     Show event logs.
  show-ipl-logs       Show IPL,Initial Program Loading, messages.
  show-mail-report    Show Mail Report configuration.
  show-panic-logs     Show Panic messages.
  show-power-logs     Show power logs.
  show-remcs          Show REMCS configuration.
  show-shell-command  Show shell keyword.
  show-status         Show system error status.
  shutdown            Shutdown request.
  thermal-history     Show recorded thermal history.
  version             Show version.
  who                 Who is on the XSCF system.
  xir                 xir,eXternally Initiated Reset.
SCF>
```

show-shell-command

The show-shell-command is used to display a login keyword that can move to the XSCF shell terminal from the Standard console.

The following is an example of command execution.

```
SCF> show-shell-command
Shell keyword code :~.
ASCII CODE         :7E2E
SCF>
```

set-shell-command

The set-shell-command is used to change a login keyword that can move to the XSCF shell terminal from the Standard console.

The default value is a tilde plus a period (~.). This can be changed on the command of Machine Administration function,too. This can be changed to a combination of up to seven characters. The required authority for this command is root level.

The following is an example of command execution.

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```
SCF> set-shell-command *******
  retype = *******
SCF>
```

Note:
The following is a reference of the command on the Machine Administration function.

scfshkey (1M)

NAME
scfshkey - Display and change the login keyword for XSCF shell.

SYNOPSYS
/usr/sbin/FJSVmadm/scfshkey
/usr/sbin/FJSVmadm/scfshkey set <keyword>

DESCRIPTION
The scfshkey command displays and changes the login keyword to move the control from the standard console to the XSCF shell.

OPTION
set <keyword>
specifies a new keyword.
The <keyword> specifies a string, which consists of alphabetic, numeric or special character. Its length is 1-7 characters.

When the OPTION is ommited, scfshkey displays the current value of the login keyword.

EXIT STATUS
The following status is returned.
0 : normal end
>0 : an error occurred

logtest[*alarm* | *warnning* | *notice*]

The logtest command is used to generate the test error. After executing this command, you can get the error logs of the specified option level. At the same time, you can receive the e-mail to the pre-configured mail address. You can check whether to have been set correctly by using this command, after setting up XSCF function. The required authority for this command is root level.

The error information can be seen from the following.

- You are able to display the erro logs in the Machine Administration Menu.
- You are able to display the error losgs by using “show-error-logs” command in the XSCF Shell.
- You are able to display the error losgs in the XSCF Web function.
- You are able to display the error information in the MIB file.
- You are able to display the error information in the received e-Mail. (Sending by XSCF Mail function.)
- You are able to display the error information in the received e-Mail. (Sending by REMCS report function.)

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For more information about MIB, see “Chapter7 XSCF SNMP Agent Function” and “AppendixC XSCF MIB”. And for information about the mail address settings used by the XSCF Mail function and the REMCS report function, see “Chapter2 Setting Up XSCF”.

The following is an example of command execution.

```
SCF> logtest alarm
SCF>
```

The following table describes the options that can be specified.

Table 6-12 logtest command options

Option	Description
alarm	Generates an alarm level error.
warinig	Generates a Warning level error.
notice	Generates a notice level error.

version

The version command is used to display the firmware version information of the XSCF and OBP. The following is an example of command execution.

```
SCF> version
*** XSCF Firmware Information ***
  XSCF Version ---------- [E02V03L01]
  WEBDATA Version ------- [E02V03L01]
  RASDB Version --------- [E02V02L01]
*** OBP Information ***
  OBP Version ----------- [E02V03L01]
*** HCP Information ***
  Current Version ------- [HCP0201]
*** Hardware Information ***
  RCI Version ----------- [0001]
SCF>
```

Next: 6.7 XSCF Shell Error Messages

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6.7 XSCF Shell Error Messages

When an XSCF shell command is used incorrectly, an error message is displayed. The following table lists the error messages displayed and explains their meaning.

Table 6-13 Shell error messages

Error message	meaning
Syntax Error	The syntax of the input command is incorrect.
Wrong name of Command	The command name is incorrect.
Wrong name of Register	The register name is incorrect.
Parameter Error	The parameter is incorrect.
Invalid option	The specified option is invalid. (Impossible mounting location or no option)
Unmounted	The requested part has not been mounted.
Permission denied	The requested command is not permitted.
Aborted	The requested command is aborted by user.

Next: "Chapter7 XSCF SNMP Agent Function"

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Chapter 7 XSCF SNMP Agent Function

This chapter describes the XSCF SNMP agent function.

This chapter has the following contents.

Contents:

7.1 Summary of XSCF SNMP Agent Function 7-2
7.2 About MIB 7-3
7.3 About Traps 7-4
7.4 How to Set up the XSCF SNMP Agent Function 7-5
7.5 Introduce Extended MIB of XSCF to SNMP Manager 7-6
7.5.1 Installation case to WebSysAdmin 7-6
7.5.2 Installation case to SystemWalker 7-8

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7.1 Summary of XSCF SNMP Agent Function

The XSCF supports the Simple Network Management Protocol (SNMP) agent function. This section provides an overview of the SNMP agent function.

The following figure shows an example of network management environment based on SNMP.

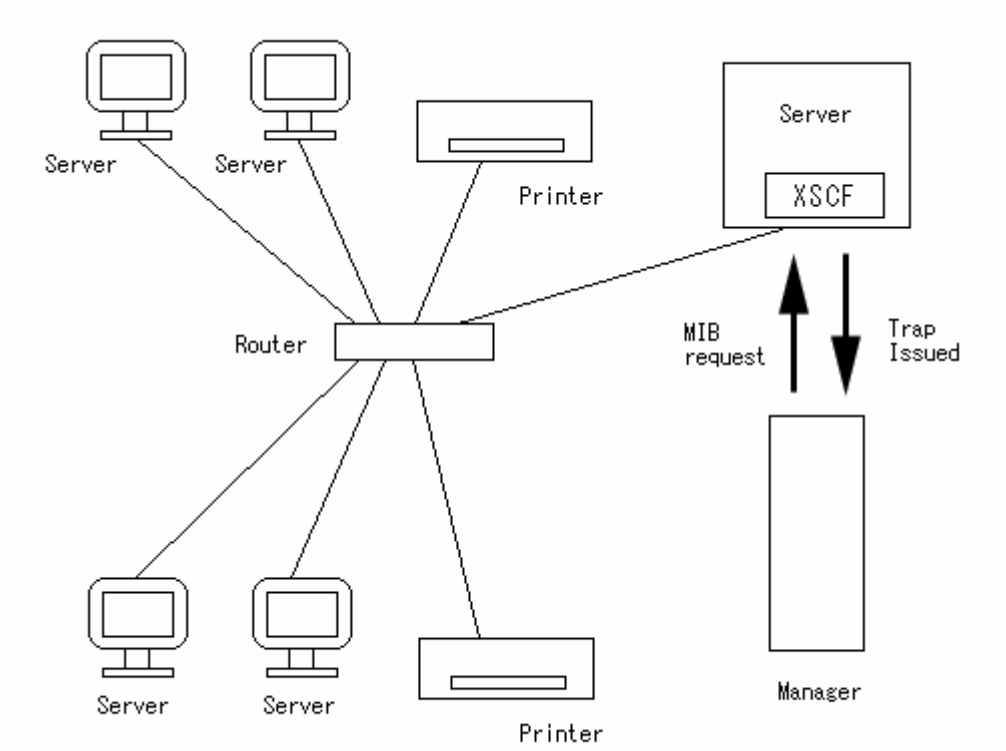

Figure 7-1 Example of network management environment

SNMP is a protocol for network management. The SNMP manager enables integrated management of the operating status and fault status of the terminals in the network. The SNMP agents return management information referred to as MIB (Management Information Base) in response to the SNMP manager's request.

For specific kinds of information, the agents can use the TRAP function to send asynchronous notifications to the SNMP manager .

Note:

Several kinds of SNMP manager may be available. For example, Web SysAdmin, WSA, software is available from us.

Next: 7.2 About MIB

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7.2 About MIB

The SNMP agent function has management information referred to as MIB (Management Information Base) and returns it in response to the SNMP manager's request.

- **Standard MIB**

XSCF supports MIB-II, the Internet standard, which manages several issues like follows:

- Basic information about the SCF-LAN (including the administrator's name)
- Information about the communication processing on the SCF-LAN
- Information about operation of the XSCF SNMP agent

For a list of standard MIBs supported by XSCF, see "Appendix C.2 Standard MIB".

- **Fujitsu extended MIB**

In addition to the standard MIB, XSCF supports the Fujitsu extended MIB, which is an extension for the XSCF SNMP agent. The Fujitsu extended MIB primarily manages the following kinds of information:

- Basic information about the server (including the serial number)
- Status information about the server (including the operating status of the host OS)
- Parts fault information on the server

For the list of Fujitsu extended MIBs supported by XSCF, see "Appendix C.3 Fujitsu Extended MIB".

Note:
The MIB file can be refferred to from the following path in the HCP-CD, too.
/PWP0/MIB

Next: 7.3 About Traps

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7.3 About Traps

The SNMP agent function can send a notification called a trap to the SNMP manager when an event occurs. XSCF supports traps in the following cases:

1) The XSCF SNMP agent function is started.
2) An unauthorized access to the XSCF SNMP agent occurs.
3) A part in the server is faulty.
4) The faulty part in the server is repaired by replacement.

Note:
In cases of above 3) and 4), the trap target parts are the following.
[Target parts for trap]*1
SB、PANEL、PCI-BD、SCSI-BP、CPU、SLOT、FAN、FAN-JT、PSU、CPUDDC、DDC-A、DDC-B

*1: The parts for which locating fault and part number can be specified among parts that XSCF observes in server.

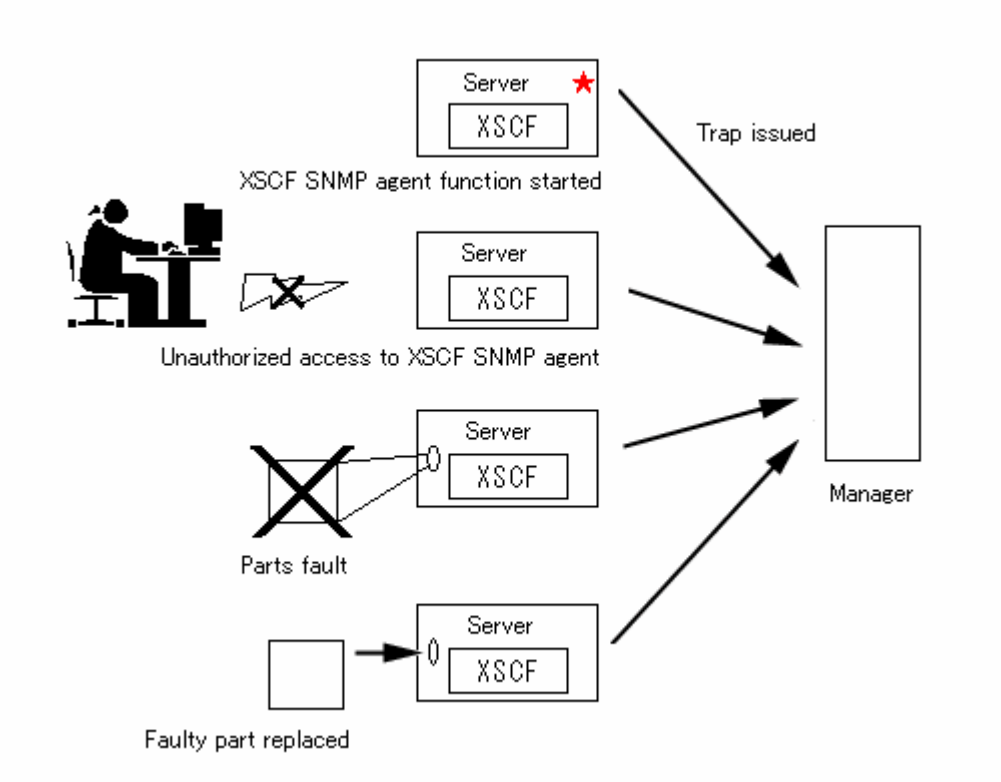

Figure 7-2 Conditions for issuing a trap

Next: 7.4 How to Set up the XSCF SNMP Agent Function

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7.4 How to Set up the XSCF SNMP Agent Function

This section describes how to set up the XSCF SNMP agent function.

The process of setting up is described below. Each setting is made from the Machine Administration Menu or the scfsnmp (1M) command (*) of the Machine Administration function. For information about the settings, see "Chapter2 Setting Up XSCF".

* The command is at ESF2.5.1 or later. For detail about the command, see the *Enhanced Support Facility User's Guide for Machine Administration* for the ESF.

- **Step 1:**

  Make sure that the XSCF SNMP agent function is disabled.

  — If the function is enabled, disable it.

  Note:

  Be careful when disabling an enabled SNMP agent function, since all MIB information, except the configuration information specified by Step 2, will be initialized

- **Step 2:**

  Make the necessary settings for the XCSF SNMP agent function:

  — XSCF manager
  — Server name
  — Server location
  — Community information 1 or community information 2

  Note:

  For the community information, either 1 or 2, or both 1 and 2 can be specified. Specifying no community information is not allowed.

  In the settings for community information, you can specify whether to enable write operations to the writable MIB and whether to enable the issuing of traps.

- **Step 3:**

  Enable the XSCF SNMP agent function.

  Note:

  If you modify the XSCF SNMP agent function settings, be sure to start at the beginning with step 1.

Next: 7.5 Introduce Extended MIB of XSCF to SNMP Manager

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7.5 Introduce Extended MIB of XSCF to SNMP Manager

This section briefly explains procedures to introduce extended MIB of XSCF into two kinds of SNMP manager, "WebSysAdmin" and "SystemWalker". Please refer to the manual of each application for details of installation method.

7.5.1 Installation case to WebSysAdmin

This work must be done with the workstation in which WeabSysAdmin is installed.

- **Step 1:**
  Make the temporary directory (In this example, "/tmp/primepower_xscf"), and copy XSCF extended MIB file from the directory in which XSCF extended MIB is installed.

```
# mkdir /tmp/primepower_xscf
# cd /tmp/primepower_xscf
# cp /opt/FJSVhcp/mib/primepower_xscf.dat  ./
#
```

Note:
The MIB file can be refferred to from the following path in the HCP-CD, too.
/PWP0/MIB

- **Step 2:**
  Backup the current MIB file to the file that you specified.
  (In this example, "/etc/snmp/mgr/snmpinfo.dat.bak") It returns to the previous state by returning the FILE.

```
# cp /etc/snmp/mgr/snmpinfo.dat  /etc/snmp/mgr/snmpinfo.dat.bak
#
```

- **Step 3:**
  Merge XSCF extended MIB file with current MIB file by the command "mergeinfo". When you face any warning or error messages from mergeinfo, go to Step 5.

```
# /opt/SMAW/bin/mergeinfo  primepower_xscf.dat
#
```

- **Step 4:**
  If file /etc/snmp/mgr/snmpinfo.dat is updated, and new MIB information is added to the content, the installation work is completed.

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- **Step 5:**
  When there is message of this command in the merging work, merging has not ended normally.

  Please confirm the manual of WebSysAdmin in detail.

- **Example : Message example of merging command**

Here, a typical message of the merging command and the action method of the message is shown as follows.

```
# /opt/SMAW/bin/mergeinfo primepower_xscf.dat
/opt/SMAW/bin/mergeinfo:check_names:
Duplicate name with different OID's:rfc1157Domain
      OID1: 1.3.6.1.6.2.1.1, OID2: 1.3.6.1.3.11.3.1.1
#
```

Problem: Merging was canceled, because the key word "Rfc1157Domain" of OID:1.3.6.1.3.11.3.1.1 in a new MIB infomation has already been used with OID:1.3.6.1.6.2.1.1 in current MIB infomation.
Action : Please correct the key word of new MIB infomation not to conflict, and try the merge of MIB infomation again.

[Before correcting the key word]

```
view                    1.3.6.1.3.11                    nonLeaf
viewDomains             1.3.6.1.3.11.3                  nonLeaf
snmpDomain              1.3.6.1.3.11.3.1                nonLeaf
rfc1157Domain           1.3.6.1.3.11.3.1.1              nonLeaf
cltsDomain              1.3.6.1.3.11.3.1.3              nonLeaf
cotsNDomain             1.3.6.1.3.11.3.1.4              nonLeaf
cotsXDomain             1.3.6.1.3.11.3.1.5              nonLeaf
```

[After correcting the key word]

```
view                    1.3.6.1.3.11                    nonLeaf
viewDomains             1.3.6.1.3.11.3                  nonLeaf
snmpDomain              1.3.6.1.3.11.3.1                nonLeaf
rfc1157Domain_2         1.3.6.1.3.11.3.1.1              nonLeaf
cltsDomain              1.3.6.1.3.11.3.1.3              nonLeaf
cotsNDomain             1.3.6.1.3.11.3.1.4              nonLeaf
cotsXDomain             1.3.6.1.3.11.3.1.5              nonLeaf
```


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7.5.2 Installation case to SystemWalker

- **Step 1:**
  Start the application of "System Monitor" of SystemWalker, and click in the following order.
  "Tools" menu → "Extend MIB".

  "Extend MIB" dialog box is displayed.

- **Step 2:**
  Click "Add" button of "Extend MIB" dialog box.

  "Select of Extend MIB file" dialog box is displayed.

- **Step 3:**
  Select extended MIB file of XSCF in "Select of Extend MIB file" dialog box.

  Selected extend MIB compilation is begun. When the compilation is completed, "Extend MIB" dialog box is displayed.

- **Step 4:**
  Click the "OK" button in "Extend MIB" dialog box .

- **Step 5:**
  Close "Extend MIB" dialog box.

- **Step 6:**
  Start "MS command prompt", and execute the following command.
  Name of the directory used here must be different from your environment. Please specify your using directory.

```
C:¥> [Directory of SystemWalker]¥MPWALKER.DM¥MpCNappl¥MpCNmgr¥bin¥
CNSetCnfMg.exe -f [Directory of XSCF MIB]¥primepower_xscf.cnf -a
****************************************

 Check proccessing Start.

****************************************

Warning (Source: 0001) : You should check the representation of Enterprise-
                         OID in your target SystemWalker system.

****************************************

 Check processing has ended.

       Processed records     : 329

       Processed definitions : 7

****************************************

C:¥>
```


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Note:
The MIB file can be refferred to from the following path in the HCP-CD, too.
/PWP0/MIB

- **Step 7:**
  Click as follows in the application "System Monitor" of SystemWalker.

  "Policy" menu →"Distribute policy".

  "Policy Distribution" dialog box is displayed.

- **Step 8:**
  Select "Apply immediately (Restart distribution destination service)" in "Policy Distribution" dialog box, and click “OK".

  "Policy Distributing Status" dialog is displayed.

- **Step 9:**
  "Policy Distributing Status" dialog ends automatically when the distribution of the policy ends.

Next, a setup which calls "XSCF WEB function" from SystemWalker is performed.

- **Step 10:**
  Click in the following order on "System Monitor" windows of SystemWalker.

  Select "Tools" menu and go "Add Operation Menu".
  "Add Operation Menu" dialog box is displayed.

- **Step 11:**
  Select "Single System" and click "Add..." button.
  "Single System(Add)" dialog box is displayed.

- **Step 12:**
  Set the following items, and click “OK" button.

  [Menu Item] Set "XSCF WEB".

  [Command Line]
  "C:¥Program Files¥Internet Explorer¥iexplore.exe" https://%IP
  (This is a example. Please set a browser used.)
  "Add Operation Menu" message box is displayed.

- **Step 13:**
  Click “OK" button.
  "Add Operation Menu" dialog box close.

- **Step 14:**
  Reboot the "System Monitor" of SystemWalker.

- **Step 15:**
  We will be able to use new menu item "XSCF WEB" by the following methods.

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"Tools" menu → "Specific Node(System)" item → "XSCF WEB" item
"XSCF WEB" is started on a specified browser.

The installation on XSCF extended MIB is completed by this.

Next: "Chapter 8 XSCF Mail Function"

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Chapter 8 XSCF Mail Function

This chapter describes the XSCF mail function.

This chapter has the following contents.

Contents:

8.1 Overview of XSCF Mail Function 8-2
8.2 Reporting Parts Faults 8-4
8.3 Reporting an Authentication Failure 8-5
8.4 Setting up the XSCF Mail Function 8-6
8.5 Contents of Parts Fault Notification 8-7
8.6 Contents of Authentication Failure Notification 8-9
8.7 Contents of Test Mail Notification 8-10
8.8 Contents of Suspension Mail Notification 8-11

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8.1 Overview of XSCF Mail Function

This system has two kinds of abnormality notification mechanism by mail, originally. One is managed by machine administration, which is a part of ESF, the other is achieved by XSCF. This section describes the features of both functions.

Features of mail function for machine administration

- Notification by e-mail of peripheral unit faults
  Since the function sends e-mail for faults that are detected at not only a part in server but also at peripheral units connected to the server, wide range of system problems can be informed.

- Reporting of detailed fault information with an attached file
  Since the function attaches the detailed information of a fault part to the mail, the cause of the fault can be determined more clearly.

Features of the XSCF mail function

- Notification by e-mail of each case of a parts fault on the server
  Even though a system failure or serious failure that prevents normal operation of OS occurs, the function is still able to send e-mail.

- POP authentication facility at e-mail sendings is possible
  To prevent illegal Mail Sending, **POP Authentication (POP before SMTP)** can be done before Mail Sending is accepted with SMTP server.

Note:

Single problem may cause two separate e-mail messages, one from the machine administration and one from XSCF. For more definite and complete detection of errors, **Enabling the mail notification of both functions, machine administration and XSCF, is recommended.**

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The XSCF mail function has the following features:

- Reporting server parts faults by e-mail to the system administrator
- Reporting an SCF-LAN authentication failure by e-mail to the system administrator

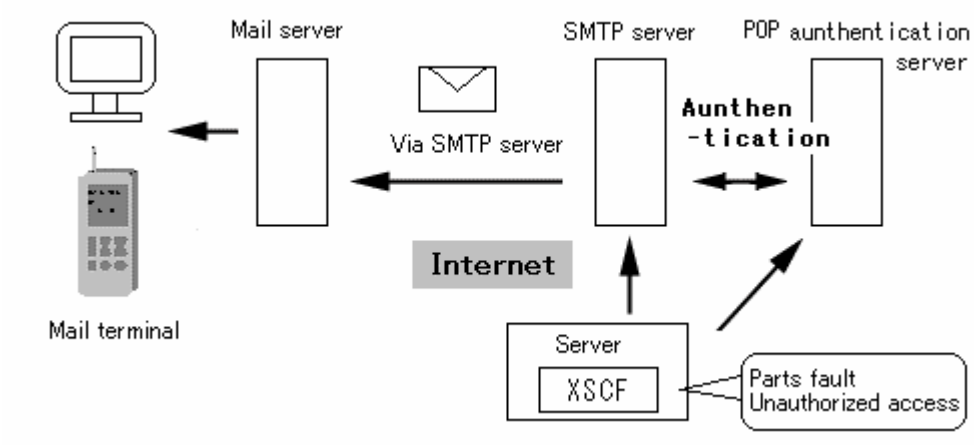

Figure 8.1-1 Outline of XSCF mail function

The following is the e-mail notification method. Setting is performed from the Machine Administration Menu or on the command line of the Machine Administration function.

- Sending e-mail via the SMTP server
  The host name or the IP address of the SMTP server must be specified.

- Sending e-mail with POP authentication
  The host name or the IP address of the POP authentication server must be specified. Then, ID and password for the authentication is required.

Note:

When you specify the SMTP server and the POP authentication server, the “Name server” settings is required. After the mail settings, test mails are sent automatically.

When the test mail is completed, the Mail sending function becomes an enable. Please refer to "Show Current Configuration" of "Mail Administration" otion of the Machine Administration Menu or refer to "mail" option of the scfstat (1M) command (*) of the Machine Administration function whether to have completed the test normally.

For information about the SMTP server, the POP authentication server and the Name server settings, see "Chapter2 Setting Up XSCF".

* The command is at ESF2.5.1 or later. For detail about the command, see the *Machine Administration Guide* for the ESF.

Next: 8.2 Reporting Parts Faults

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8.2 Reporting Parts Faults

XSCF monitors the parts in the server (including the CPU, fan, and system board). If an error occurs for any of these parts, XSCF sends an e-mail notification to the system administrator.

In the following figure, XSCF reports parts faults to the system administrator by mail.

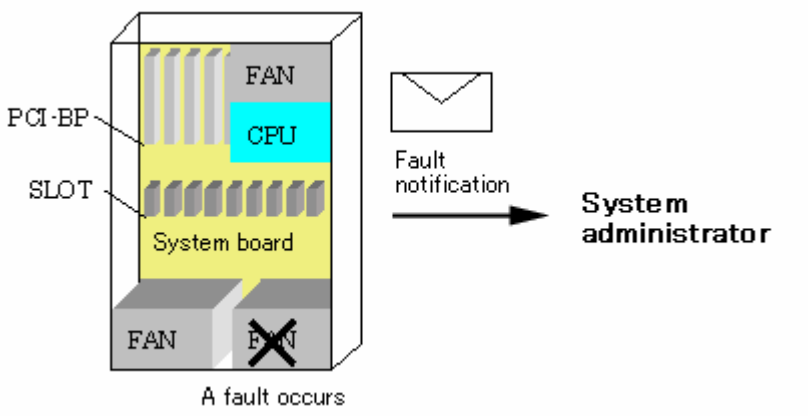

Figure 8-2 XSCF fault information

8.3 Reporting an Authentication Failure

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8.3 Reporting an Authentication Failure

If unauthorized access to the SCF-LAN is attempted, XSCF sends an e-mail notification to the system administrator.

In the following figure, XSCF reports an authentication failure to the system administrator by e-mail.

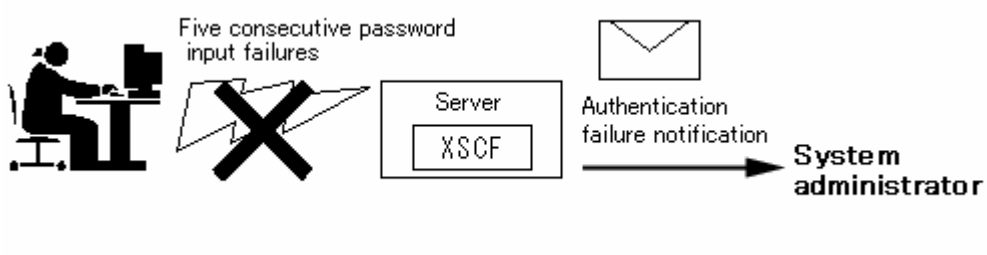

Figure 8-3 XSCF authentication failure notification

Next: 8.4 Setting up the XSCF Mail Function

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8.4 Setting up the XSCF Mail Function

This section explains how to setting up the XSCF mail function.

The required steps are explained below. Each setting is made from the Machine Administration Menu or on the command line of the Machine Administration function. For details of the settings, see "Chapter2 Setting Up XSCF".

- **Step 1:** Go to "Mail Administration" option of “XSCF Administration” menu of the Machine Administration menu. Or use to the scfmail (1M) command (*) of the Machine Administration function.

- **Step 2:** Enable the XSCF mail function.

- **Step 3:** Specify the following information for the XSCF mail settings:
  - Specify the host name or the IP address of the SMTP server.
  - Specify the host name or the IP address of the POP Authentication server
  - Specify the mail address of the system administrator as the mail destination.
  - Specify From information.

  Note:
  If you will specify the host name of the SMTP server or the POP server, before **STEP 1**, the Name server settings is required at the “Network Configuration” option of “XSCF Administration” menu in the Machine Administration Menu or at the scfconsole (1M) command (*) of the Machine Administration function.

- **Step 4:** Send test mail.
  Send test mail with using the Machine Administration Menu or the command of the Machine Administration function. If the e-mail is received by the system administrator, the setting process is complete. If the e-mail is not received, the mail is sent to the destination for undelivered mail or the error logs is recorded. Determine why the mail could not be delivered and make the necessary modifications, then restart from step 1. For the Machine Administration Menu, see the *Enhanced Support Facility User’s Guide for Machine Administration* of the ESF.

* The command is at ESF2.5.1 or later. For detail about the command, see the *Machine Administration Guide* for the ESF.

Next: 8.5 Contents of Parts Fault Notification

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8.5 Contents of Parts Fault Notification

This section explains the contents of e-mail that is sent when a faulty part is detected.
The following shows the contents of an e-mail notification.

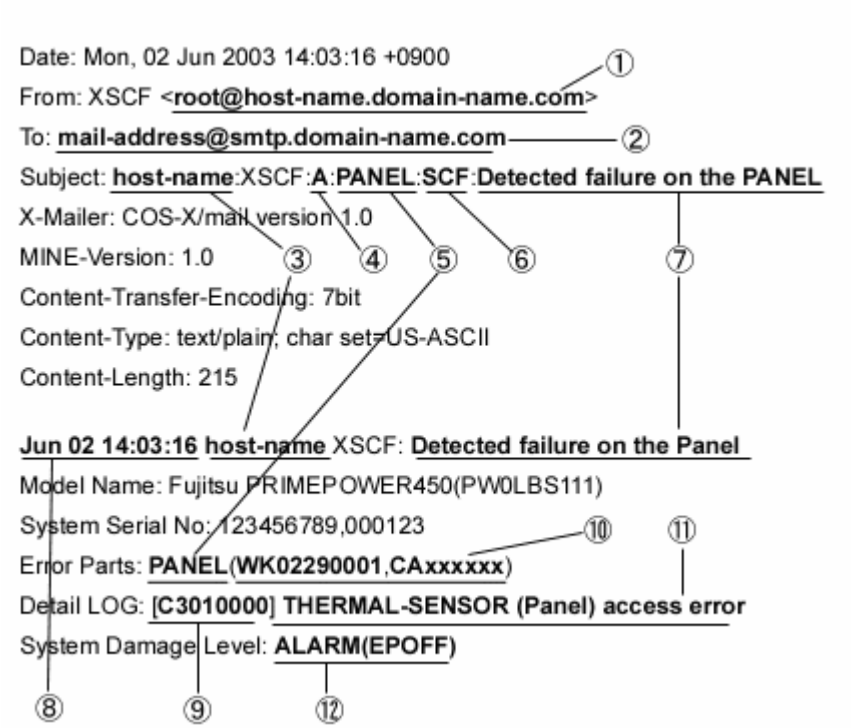

Figure 8-4 Mail reporting a faulty part

The following describes how to read the contents of the mail shown in Figure 8-4.

1. Mail address specified for the From designation in the mail settings.
2. Mail address specified as the destination mail address in the mail settings.

For the above settings , see "Chapter2 Setting Up XSCF".

3. Host name of XSCF.
4. Fault level of the faulty part, which is one of the following:
   - A: Fault or abnormal condition (Alarm)
   - W: Part degraded or warning (Warning)
   - I: Notification (Information)
5. Faulty part (n indicates the part number). For the types of parts, see Table B-1-P of AppendixB. For information about part names, see "Glossary".
6. Hardware unit where the fault was detected
   SCF
   POST
   OBP
7. Message output by the system. For the meaning of messages, see "Appendix A Warning Messages".
8. Time at which the fault occurred. The time is the local time.
9. Error code. For the error codes, see "Appendix B XSCF Log Information".
10. Serial number of the faulty part.

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11. Error message. For the error messages, see "Appendix B XSCF Log Information".
12. Fault level of the system, which is one of the following:
    - ALARM : Fatal problem for system
      - (EPOFF) : Emergency power off.
      - (STOP) : Emergency shutdown.
      - (UNABLE TO START) : The system could not be stated.
    - WARNING : Serious problem, but system can keep working
    - NOTICE : Notification

Next: 8.6 Contents of Authentication Failure Notification

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8.6 Contents of Authentication Failure Notification

This section explains the contents of the e-mail that is sent when authentication fails.
The following shows the contents of the mail that is sent.

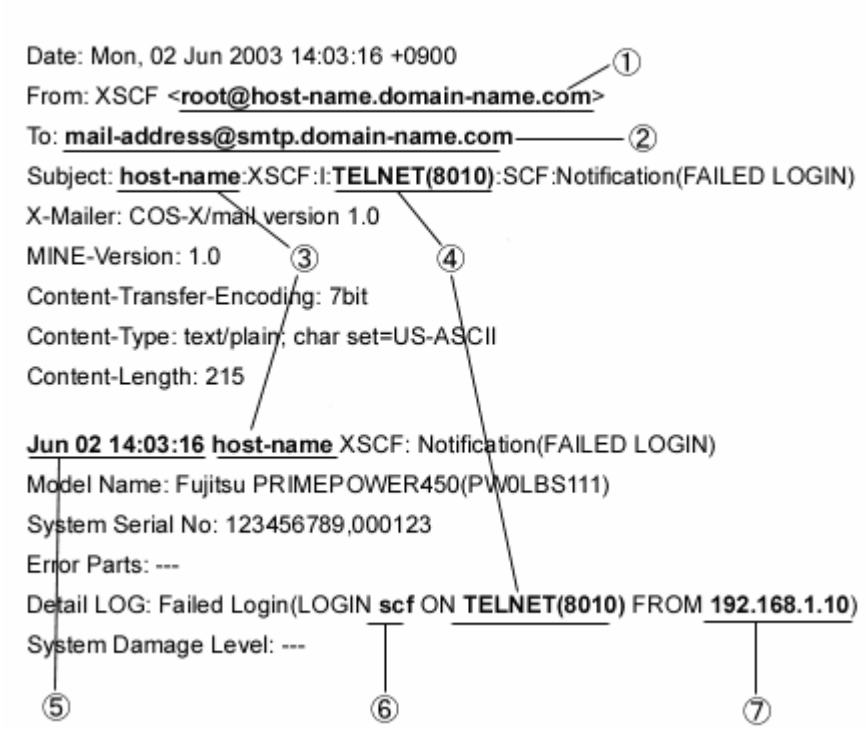

Figure 8-5 Mail reporting authentication fails

The following describes how to read the contents of the mail shown in Figure 8-5.

Circled items 1 to 3 above are the same as in the previous section.

4. Network access when the authentication failure occurred. The number in parentheses indicates the port number.

The following table lists the types of network access and the port numbers.

Table 8-1 Network access types and port numbers

Type (port number)	Meaning
TELNET(8010)	Access from TELNET port 8010.
SSH(8810)	Access from SSH port 8810.
SSH(8811)	Access from SSH port 8811.
SSH(8812)	Access from SSH port 8812.
SSH(22)	Access from SSH port 22.
SSL(443)	Access from SSL port 443.
HTTP(80)	Access from HTTP port 80.
RS232C	Access from the serial port (tty-a).

5. Time at which the authentication failure occurred. The time is the local time.
6. User name used in the authentication failure.
7. IP address of machine that attempted authentication.

Next: 8.7 Contents of Test Mail Notification

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8.7 Contents of Test Mail Notification

After settings for the XSCF mail function are complete, test mail can be sent to verify the settings. This section explains the contents of the e-mail sent as test mail.

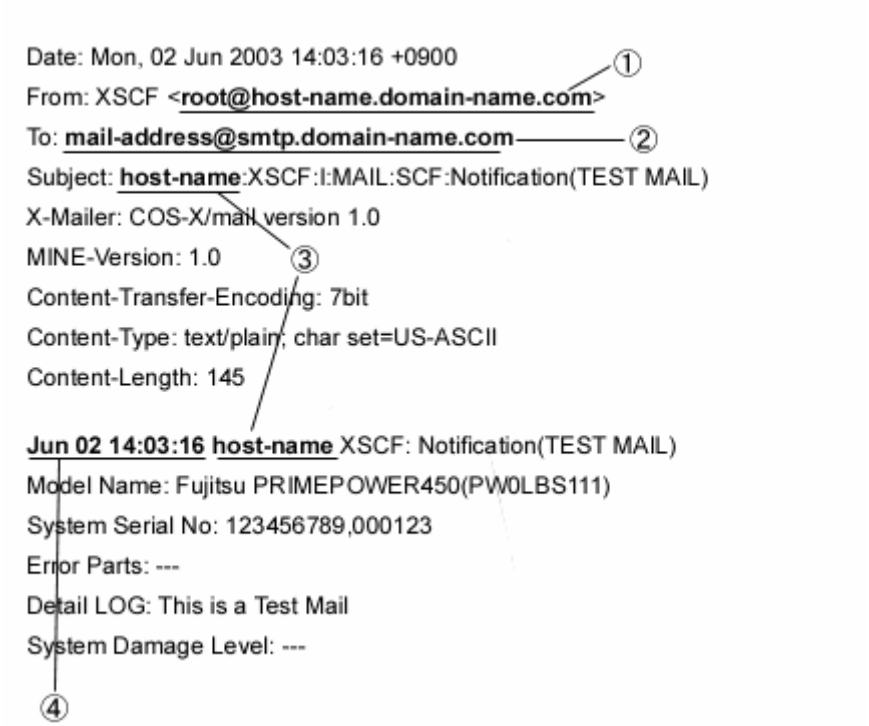

Figure 8-6 test mail

The following describes how to read the contents of mail shown in Figure 8-6.

Circled items 1 to 3 above are the same as in the previous sections.

4. Time at which the test mail was sent. The time is the local time.

Next: 8.8 Contents of Suspension Mail Notification

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8.8 Contents of Suspension Mail Notification

If it has some events in XSCF or the status of SMTP server and network is not normal, the notification of XSCF E-mail might be suspended. This section explains the contents of the e-mail sent when the Mail reporting was suspended.

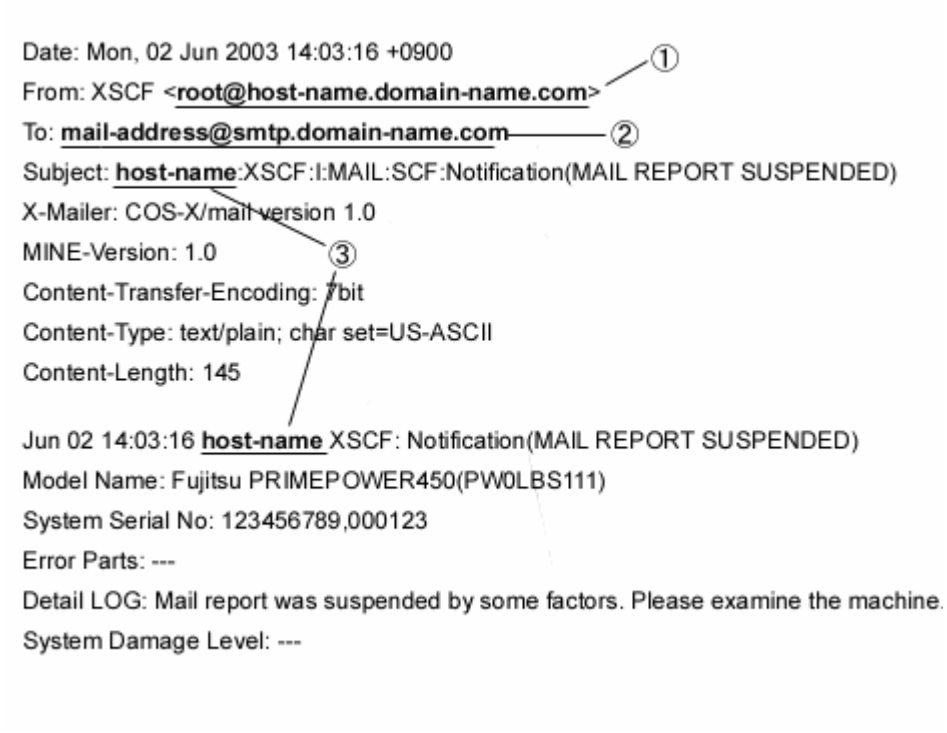

Figure 8-7 Mail reporting suspension

Circled items 1 to 3 above are the same as in the previous section.

Next: "Appendix 9 XSCF REMCS Agent Function"

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Chapter 9 XSCF REMCS Agent Function

This chapter explains the REMCS agent function via XSCF.

This chapter has the following contents.

Contents:

9.1 Summary of XSCF REMCS Agent Function 9-2
9.2 Part of XSCF 9-4
9.3 Types of REMCS Center Connection 9-5
9.4 How to Set up the XSCF REMCS Agent Function 9-8

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9.1 Summary of XSCF REMCS Agent Function

REMCS, REMote Customer Support system, Agent is software, which spares customer's effort and time in order to maintain customer's system. REMCS Agent works with help of the REMCS center system. A customer's machines are monitored by REMCS Agent instead of the customer, and REMCS Agent supports the customer's operations by communicating with the support center via networks.

The following is summary of REMCS agent fucntion. For more information about REMCS Agent function, see the *Enhanced Support Facility User's Guide for REMCS* for the ESF.

Registration

Registration function sends customers' machine information such as software configuration, hardware configuration and registers it to the center. REMCS Agent automatically collects the machine information and sends it to the center. If the system configuration of a machine is changed, the change is automatically detected. Information on the change is sent to the center so that the REMCS Center manages the latest machine information.

Note:
XSCF don’t need the Registration. The Machine Administration function do the Registration.

Remote notification

REMCS Agent constantly monitors the status of machines. If a hardware failure occurs, it is automatically detected and the REMCS Center is immediately notified of the abnormal event. Information (such as that in a log and memory dump) required for incident analysis is sent to the center. The temperature of the machine cabinet is continuously monitored and is periodically sent to the center as statistical information. The center analyzes the received information to investigate the cause of the failure and monitors for foreseeable signs of another failure. The remote notification function does not require any special operation by customers.

XSCF supports the remote notification function more strongly in cooperation with the Machine Administration function.

Investigation information collection

If a problem occurs (such as faulty operation of software) and it cannot be automatically detected, investigation Information can be collected in a simple operation, and the information can be sent to the REMCS Center.

Note:
XSCF don’t support this function. The Investigation information collection is done on the Machine Administration function.

Reception of firmware

At the time of periodic connection specified by a customer, REMCS Agent is connected to the REMCS Center. If new firmware (microprogram) is available but not installed on the machines, it is automatically received.

The firmware can also be downloaded manually. (* Only in the models that support manual

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reception.)

Using this function, customers can maintain their firmware at the latest version.

For more information of firmware update, see “Chapter10 XSCF Firmware Update and Dump”.

Note:

XSCF don’t support this function. The Reception of firmware is done on the Machine Administration function.

Next: 9.2 Part of XSCF

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9.2 Part of XSCF

REMCS agent is a function installed in machine administration. XSCF follows this function. XSCF is used partially of this function. The support can be strengthened further more by the XSCF function's joining the REMCS agent which has the conventional Machine Administration function. It is because it is to have come to be able to correspond also to a serious problem(such as system shutdown, system can't start).

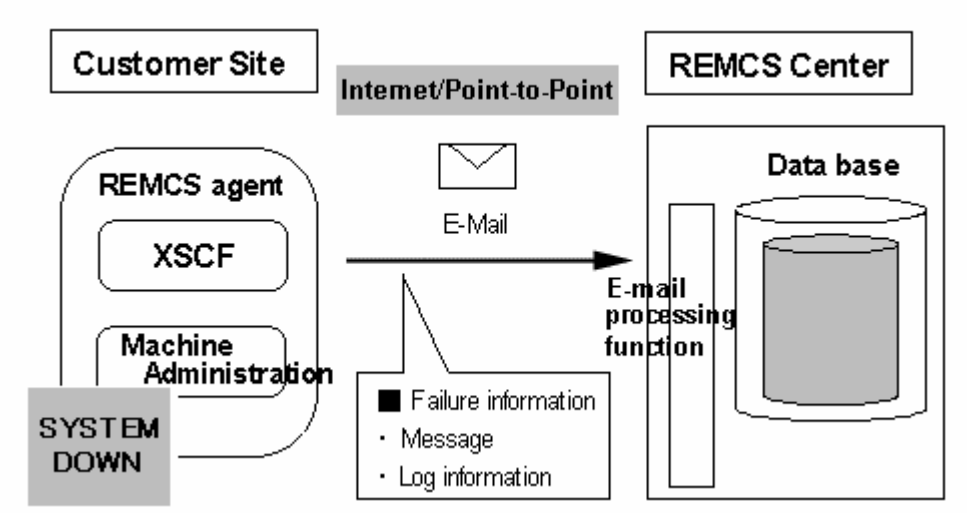

Figure 9-1 Example of REMCS report via XSCF

Even if the system is down, abnormality can be detected

The Machine administration function is usually communicating with the REMCS center. If the Machne administration function is downed, XSCF communicates with the center instead of it. As a result, errors can be detected more completely and early, and a stronger support can be achieved.

The following is the supporting REMCS agent function of XSCF.

Table 9-1 Supporting Differences from the Machine Administration function in REMCS

Functions of REMCS Agent	Machine administration	XSCF
Registration	necessary	unnecessary
Remote Notification ● Failure information ● Periodical connection	 support support	 support support
Investigation information collection	support	not support
Reception of firmware	support	not support

Next: 9.3 Types of REMCS Center Connection

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9.3 Types of REMCS Center Connection

The connection type between customer machine and REMCS Center has five types as follows When REMCS service is used.

Internet Connection

In this type of connection, the customer machine will be connected to REMCS Center via Internet, directly. SMTP server is used to send to the REMCS Center. And, HTTP server is used to receive from the REMCS Center. XSCF doesn't use HTTP server.

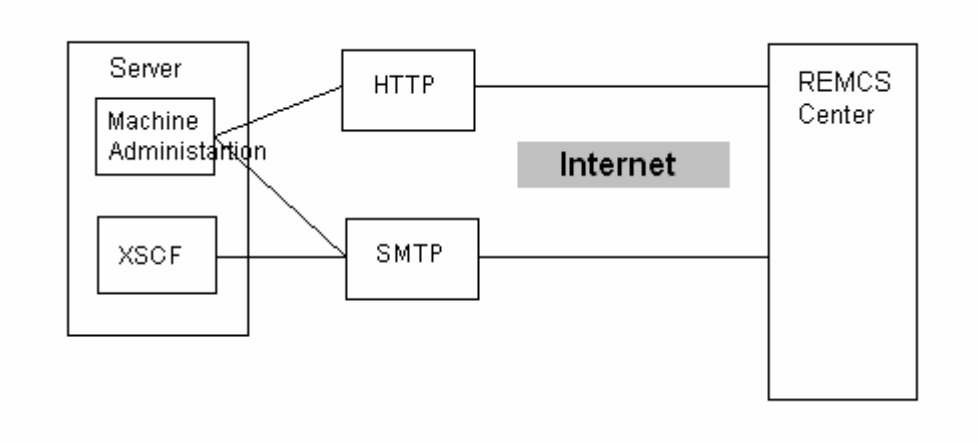

Figure 9-2 REMCS report of internet connection

Internet Connection(Mail only)

In this type of connection, the customer machine will be connected to REMCS Center via Internet, directly. However, only SMTP server is used to send to the REMCS Center. Therefore, the firmware reception function is not available.

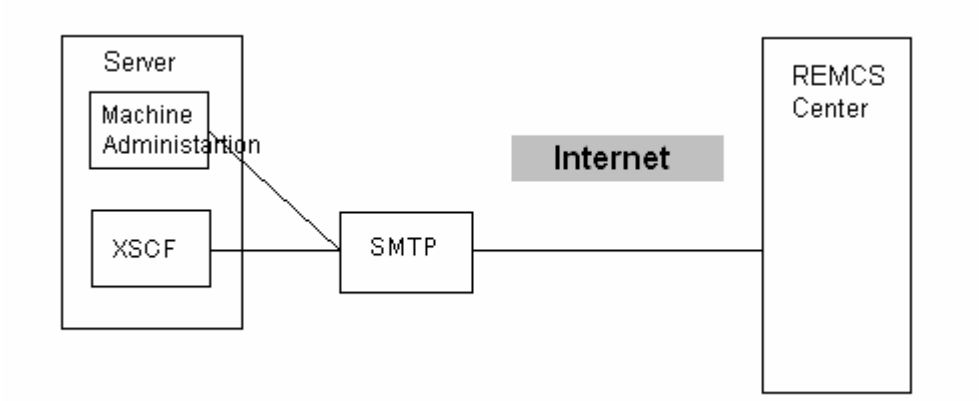

Figure 9-3 REMCS report of internet connection(Mail only)

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Point-to-Point(ISDN) Connection

In this type of connection, the customer machine will be connected to REMCS Center via ISDN line, directly. It is necessary to connect both LAN that the Machine Administration function uses and LAN that XSCF uses with the ISDN line.

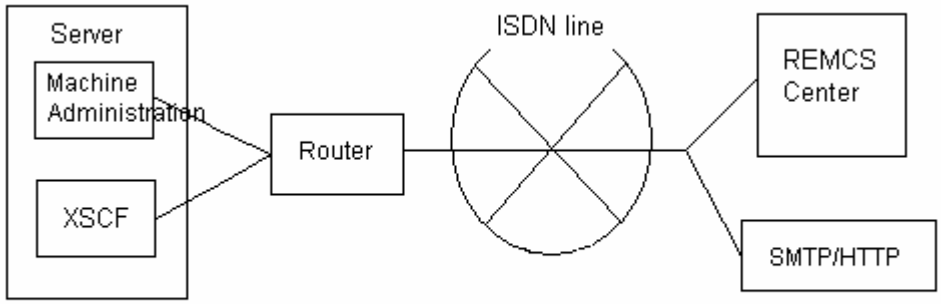

Figure 9-4 REMCS report of Point-to-Point(ISDN) connection

Point-to-Point(VPN) Connection

In this type of connection, the customer machine will be connected to REMCS Center via broadband line, such as ADSL etc., with using VPN router. It is necessary to connect both LAN that the Machine Administration function and LAN that XSCF uses with the VPN router.

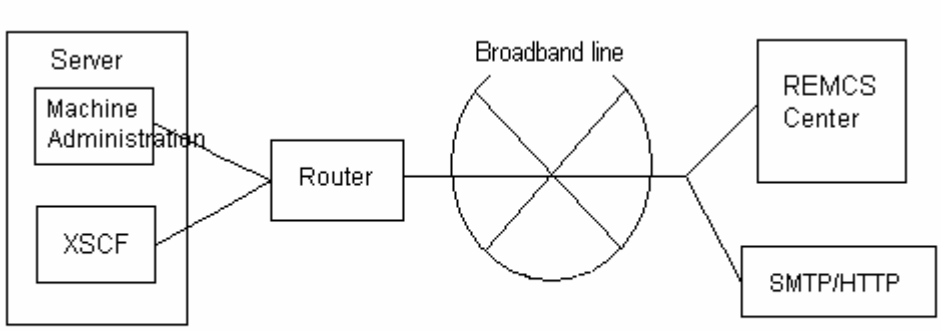

Figure 9-5 REMCS report of Point-to-Point(VPN) connection

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Management Server Connection

Because XSCF cannot be communicated with the management server, SMTP server is necessary. Therefore, the setting of SMTP server becomes indispensable as for the XSCF function. For more information about Management Server Connection, see the *Enhanced Support Facility User's Guide for REMCS*.

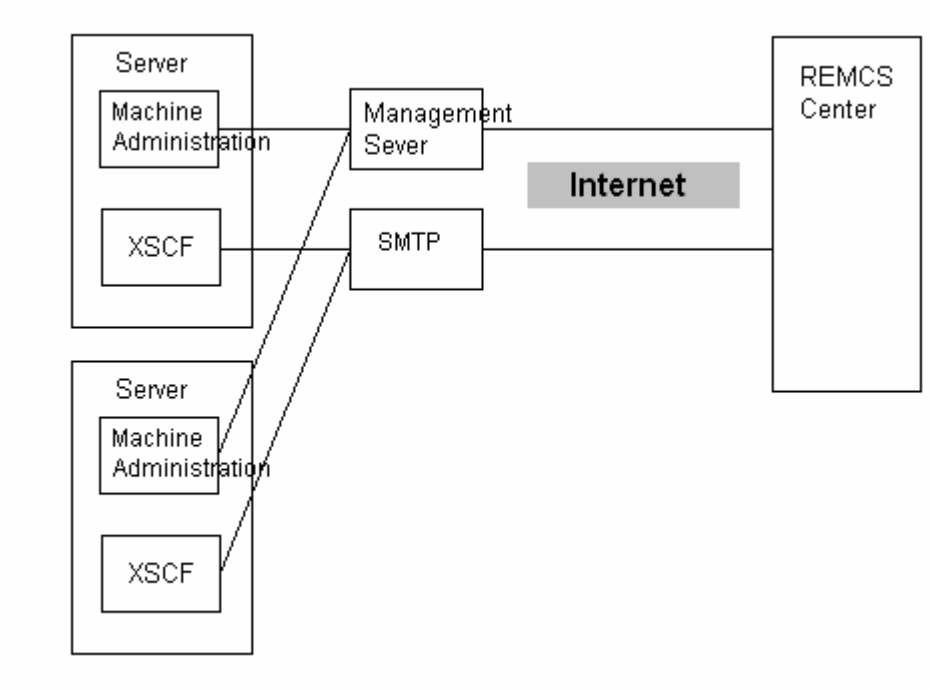

Figure 9-6 REMCS report of Management Server connection

Next: 9.4 How to Set up the XSCF REMCS Agent Function

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9.4 How to Set up the XSCF REMCS Agent Function

This section explains how to setting up the XSCF REMCS agent.

The required steps are explained below. Each setting is made from the Machine Administration Menu. For details of the settings,

- Step 1: Setting up XSCF network environment.

Set the XSCF network environment on the Machine Administration Menu. For information of “Network Configuration”, see "Chapter2 Setting Up XSCF".

- Step 2: Setting up REMCS agent environment.

Set the REMCS agent environment on the Machine Administration Menu. And do the Registration, Setting up REMCS environment and Connection check. For informations of the settings, see the *Enhanced Support Facility User's Guide for REMCS*.

- Step3: Setting up XSCF REMCS notification

In Setting up REMCS agent on Machine Administration Menu, do the setting of REMCS Environment Setting via XSCF. For information of the setting, see "Chapter2 Setting Up XSCF".

- Step4: Connection Check

After the setting, the Machine Administration function checks the connection. E-mail is send from REMCS center, when the setting is normality, and check it, please.

Next: "Chapter 10 XSCF Firmware Upgrade and Dump"

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Chapter 10 XSCF Firmware Upgrade and Dump

This chapter explains how to upgrade the XSCF firmware, obtain a dump, and record logs.

This chapter has the following contents.

Contents:

10.1 Upgrading the XSCF Firmware 10-2
10.2 How to Get XSCF Dump Information and Collect Logs 10-6

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10.1 Upgrading the XSCF Firmware

This section explains how to upgrade the XSCF firmware.

Before upgrading firmware

Note the following before upgrading firmware.

- Firmware upgrades are performed by the system administrator or a trained field engineer allowed by the system administrator with root -level authority.
- When the firmware upgrades are completed, the system uses the firmware data updated newly.
- When you upgrade the firmware, please do not return the number of the firmware version to old number of version.
- **Failure case of the Firmware Update**

  Because the current firmware data have been backed up to the server, so even if you fail in the Firmware Upgrades, the system continues running normally. Only when you succeed in the Firmware Upgrades, the system uses the new updated firmware data.
- **Cluster configuration case of the System**

  When the system is cluster configuration, please update the firmware referring to the following document.
  - PRIMECLUSTER Trouble Shooting Guide

    In Chapter4, "Maintenance", see section, "Updating".

Operating environment

- Solaris 8 OS
- Solaris 9 OS
- Solaris 10 OS
- ESF 2.3 or later

Upgrading firmware from the machine administration function

The XSCF firmware is upgraded as a part of several firmware.

Upgrade firmware executed from the **Machine Administration Menu** that operates on the Solaris OS. The operations guide for performing this operation is provided on the Machine Administration Menu. For information about the Machine Administration Menu, see the *Enhanced Support Facility User's Guide for Machine Administration* for ESF.

The server has the following firmware:

- XSCF firmware
- OBP firmware
- Disk firmware

The basics of firmware upgrading from the machine administration function are provided below.

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● Registration from CD-ROM of Hardware Control Program(:HCP, hereafter)

1. Set the CD-ROM of HCP.

2. Start up the Machine Administration Menu.

```
#/usr/sbin/FJSVmadm/madmin
```

3. Display “Hardware Control Program (HCP) Administration” menu from the Machine Administration Menu.

```
Machine Administration Menu     - Hardware Control Program (HCP) Administration -

- HCP File Operation

- Update Baseboard Firmware

- Disk Firmware Administration
```

(This window is an example.)

4. Select “HCP File Operation”, then select “Show/Register the Supply HCP”. Select “CD-ROM”, and register the firmware by the Machine Administration Menu.
   (In this state, it is not upgraded yet.)

5. Return to “Hardware Control Program (HCP) Administration” menu. Select “Update Baseboard Firmware”, then select “Show/Register Current Baseboard Firmware”.
   (At this time, the current firmware version is displayed.)

   Next, selet “Update”.
   (At this time, some versions of the registered firmware is displayed.)
   Select the firmware version that will be upgraded.
   Using the Machine Administration Menu, apply the registered firmware.

6. Do the following to complete upgrades.
   When OBP firmware is included in the updated firmware, the OS must be restarted to check the applied firmware.
   (For about the firmware upgrade information, see “Readme” file in the CD-ROM)

   Note:
   A console the XSCF shell, a standard console and a XSCF WEB function’s browser are disconnected immediately after the update of the firmware without OBP. Please login again when you use the XSCF.

7. Using the Machine Administration Menu, verify the result of the firmware update.
   Select “Update Baseboard Firmware” in “Hardware Control Program (HCP) Administration” menu. Then select “Show/Register Current Baseboard Firmware”.
   Check whether the upgraded firmware version is displayed.

● Registration from a remote host

1. The REMCS agent function can download the firmware data to a work directory. This is initiated 1) when operator manually requested, or 2) when periodic connection to the

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REMCS center is made and new firmware is available. Since these functions are REMCS agent functions, see the *Enhanced Support Facility User's Guide for REMCS* for ESF for more information.

2. Display “Hardware Control Program (HCP) Administration” menu from the Machine Administration Menu.

3. Select “HCP File Operation”, then select “Show/Register the Supply HCP”. Select “Work Area”, and register the firmware by the Machine Administration Menu.
   (In this state, it is not upgraded yet.)

4. Do the No.5-7 of above “Registration from CD-ROM”.

● Registration from applying of the ESF patch

1. When the following Patch is offered, "Patches application" is done.

```
Patch ID : 913034-xx
Package name : FJSVhcp
Patch Name : Enhanced Support Facility 2.X : Hardware Control Program patch
                                                    (X is 3 or more.)
Patch file name : 913034-xx.tar.Z
```

You can obtain the patches data as follows.

— Download the patch from Our Site and apply patch.
— Apply patch included in the ESF Patches CD-ROM.

When you apply patch by the ESF Patches CD-ROM, about the application method, see “Applying patches” of “About patches for the Enhanced Support Facility 2.3 and, Documentation Errata” in the ESF Patches CD-ROM.

Note:
See Readme file of the patch in Our Site or the ESF Patches CD-ROM. And please be sure to check HCP version and contents of upgrade. When there is necessary related software to apply at the same time, you have to apply those patches. About the application method, see the document of each patches.

2. Download the patch file and extract the file to an arbitrary directory in the server which is applied the patch.

3. Use the “patchadd” command, and register the patch.

```
# patchadd 913034-xx

Checking installed patches...
Verifying sufficient filesystem capacity (dry run method)...
Installing patch packages...

Patch number 913034-xx has been successfully installed.
```


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```
See /var/sadm/patch/913034-xx/log for details
Executing postpatch script...
COMPLETE

Patch packages installed:
FJSVhcp

#
```

(In this state, it is not upgraded yet.)

4. Display “Hardware Control Program (HCP) Administration” menu from the Machine Administration Menu.

5. Select “HCP File Operation”, then select “Show/Register the Registered HCP”. Copy the firmware from “Work Area”, and register it by the Machine Administration Menu. Check whether the registered firmware version is displayed.

6. Do the No.5-7 of above “Registration from CD-ROM”.

Next: 10.2 How to Get XSCF Dump Information and Collect Logs

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10.2 How to Get XSCF Dump Information and Collect Logs

This section explains how to get XSCF dump information and to collect logs.

These operations are performed by the system administrator or a trained field engineer allowed by the system administrator.

Getting dump and log information using the Machine Administration Menu

The Machine Administration Menu that operates on the Solaris OS is used to get log information. For the actual menu screen, see the *Enhanced Support Facility User's Guide for Machine Administration* for ESF.

When the user gets log information, the user can also get XSCF dump information.

The following explains how to get log information using the Machine Administration Menu.

```
Machine Administration Menu - Log Management Menu -

- Log Save
```

(This window is an example.)

1. Display the log management menu from the Machine Administration Menu.
2. Choose Log Save.
3. Logs will be collected under /var/opt/FJSVmadm/log. Move the collected log file to any directory, if needed.
4. Forward collected information to a trained field engineer for more detail analysis.

Note:

Since the name of folder that holds the logs and dump file can be changed without notice, see the *Enhanced Support Facility User's Guide for Machine Administration* for ESF for more information.

The following table shows the details of collected log information by Machine Administration Menu. For reference purposes, the table also shows the maximum size of the logs that can be displayed by the XSCF shell.

Table 10-1 XSCF dump and types of XSCF logs

Type of data	Obtained data	Reference: Maximum size displayed by XSCF shell
Dump	Three generations of a XSCF dump (maximum 32-megabyte each)	-
Log	Error log	2 KByte

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	Power log	0.5KByte
	Event log	8 KByte
	Temperature history log	2 KByte
	Access log	1 KByte

Note:

The dump file and log files are compressed. Some additional log files, which are logged by Machine Administration Menu but not listed in the above table, are included to the collected log.

For the trigger for obtaining each log type and the maximum capacity for each log file required to save the log data, see the *Enhanced Support Facility User's Guide for Machine Administration* for ESF.

Next: "Appendix A Warning And Information Messages"

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Appendix A Warning And Information Messages

This appendix explains the error notification messages that XSCF outputs to the server OS console (standard console) or outputs by mail or the SNMP function.

This appendix has the followings.

Contents:

A.1 Message Types A-2
A.2 Messages in Each Function A-8

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A.1 Message Types

When an error occurs in the system, XSCF takes various action against this error, such as, displays a warning or notification message on the OS console, send TRAP to a SNMP manager, send a mail report to the administrator, and take a log.

In addition, when you power on,off, or reset the sysytem, XSCF displays an information message on the OS console.

This section describes the messages that are most likely to be seen by the user when a server error or the status of the server is reported.

The following are the typical types of messages:

- System messages
- Error messages
- Other information messages

System messages

A system message displays information in simple form when a server error or the status of the server is reported. You can locate the point of problem by displayed system message on the console.

The following table lists the system messages and their meaning.

Table A-1 System messages

System message	Meaning
Detected hardware error	An error occurred in the platform-dependent module (FRU).
Detected failure on the System Board	An error occurred on the system board (SB).
Detected failure on the fan	An error occurred in the fan.
Detected failure on the power supply unit	An error occurred in the power supply unit.
Detected failure on the CPU (CPU type=X, freq=XXXXMHz, Parts=XXXX...)	An error occurred in the CPU. *1
U2-Cache correctable Error (CPU type=X, freq=XXXXMHz, Parts=XXXX...)	A U2-cache CE occurred. *1
Cache/TLB Degrade (CPU type=X, freq=XXXXMHz, Parts=XXXX...)	Cache and TLB are degraded. *1, *2
Detected failure on the RCI node (ADDRESS=XXXXXXXX)	An RCI node error occurred.
Detected failure on the PANEL	An error occurred on the panel.
UPS failure	An error occurred in the UPS.
Notification (Message in the error log)	Notification message. The parentheses contains error log messages in a notice reporting that parts replacement is not required.

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	*1
Detected abnormality of environment	An abnormal environment condition occurred. This message is displayed when an abnormal environment condition such as an inlet warning or an error occurred and parts replacement is not required.
Detected failure on the memory module(DIMM size = xxxxMB)	A memory error occurred. *1
Detected failure on the PCI card	A PCI card error occurred. *2
Memory correctable error	A memory CE occurred. *2
DTAG correctable error	A DTAG CE occurred. *2 (DATG : The part which controls the cache of CPU.)
Hardware configuration error	A configuration error occurred.

*1: The message in parentheses is not displayed when the XSCF Web function and the XSCF Shell are used.

*2: These are the errors detected by only POST/OBP.

To investigate the details of these system messages, you can use the XSCF Web function and XSCF shell to view the error information that includes the error messages. For information about viewing Web pages and using the XSCF commands, see "Chapter5 How to Use the XSCF Web Function" and "Chapter6 How to Use the XSCF Command Shell".

Error messages

An error message is a detailed message from the server. Purpose of system message is to report the event briefly, and purpose of error message is to reports detail information of event, such as, the cause and a part number. Error message is consist of up to 48 characters. You can see the messages as a part of output from show-error-log command on XSCF shell.

For the list of error messages and corrective actions, see the list of messages displayed by the show-error-logs command described in "Appendix B XSCF Log Information".

Other information messages

In addition to the above system messages and error messages, there are also the information messages to display them on the OS console when a normal power-on, off and reset is performed.

1.Initial diagnose messages

Initial diagnose message is displayed on the OS console when a XSCF reset is done.
The initial diagnose message is displayed at the next cases.

- **Displays it only on the OS console connected via serial(RS232C) port.**

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- Displays it when an input power source is turned on at MAINTENANCE mode on the mode switch.
- Displays it when the firmware update is performed on the Machine Administration Menu at MAINTENANCE mode on the mode switch.
- Displays three bottoms messages of figure A-1 always when an input power source is turned on and when the firmware update is performed. This does not depend on the mode switch status.

The following is the XSCF's initial diagnose messages.

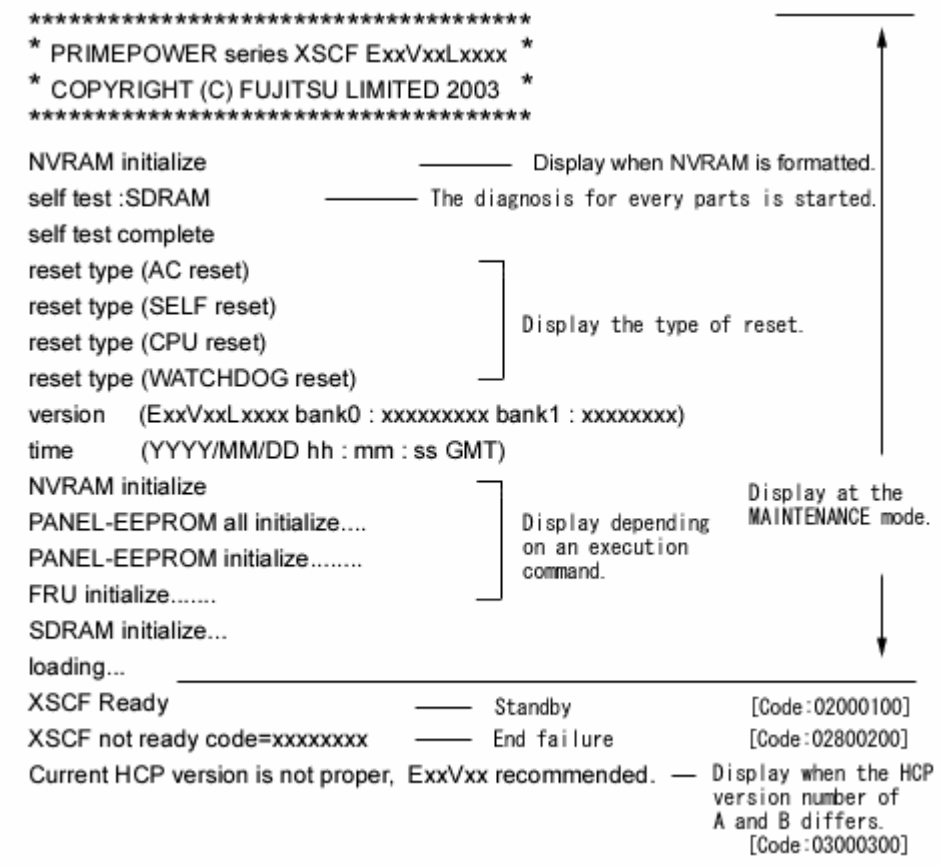

Figure A-1 Initial diagnose messages

2.Normal power-on messages

The following information message is displayed on the OS console when a normal power-on is performed.

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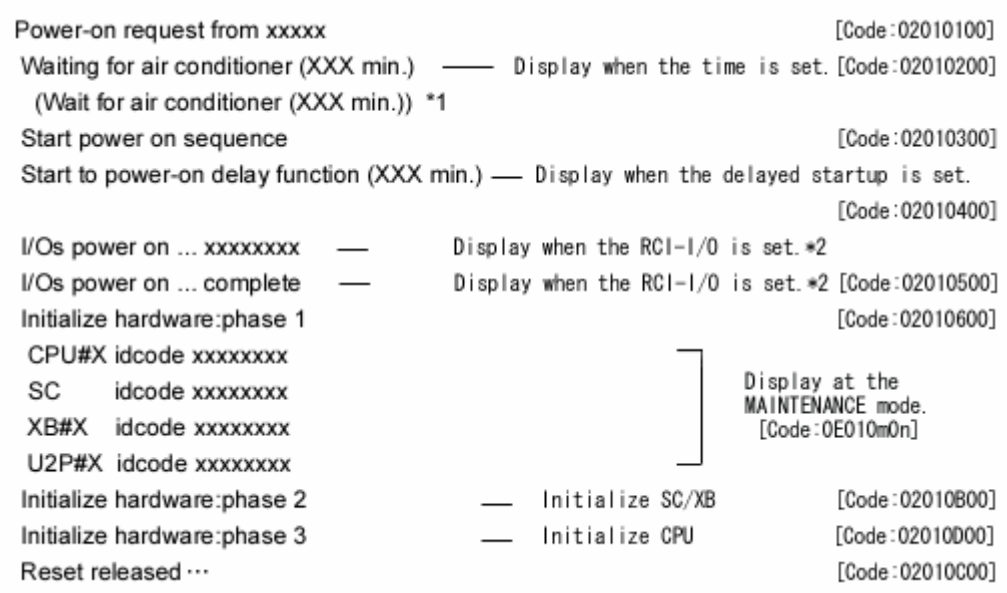
Power-on request from xxxxx [Code:02010100]
Waiting for air conditioner (XXX min.) —— Display when the time is set. [Code:02010200]
(Wait for air conditioner (XXX min.)) *1
Start power on sequence [Code:02010300]
Start to power-on delay function (XXX min.) — Display when the delayed startup is set.
[Code:02010400]
I/Os power on ... xxxxxxxx — Display when the RCI-I/O is set.*2
I/Os power on ... complete — Display when the RCI-I/O is set.*2 [Code:02010500]
Initialize hardware:phase 1 [Code:02010600]
CPU#X idcode xxxxxxxx
SC idcode xxxxxxxx
XB#X idcode xxxxxxxx
U2P#X idcode xxxxxxxx
Display at the MAINTENANCE mode. [Code:0E010m0n]
Initialize hardware:phase 2 — Initialize SC/XB [Code:02010B00]
Initialize hardware:phase 3 — Initialize CPU [Code:02010D00]
Reset released … [Code:02010C00]

*1 The parentheses contains a message at HCP version 0504 or before.

*2 xxxxxxxx is an I/O Unit address which has powered on. "I/Os power on ... complete" is displayed when all I/O unit have completed power-on.

Figure A-2 Normal power-on messages

3.Normal power-off messages

The following information message is displayed on the OS console when a normal power-off is performed.

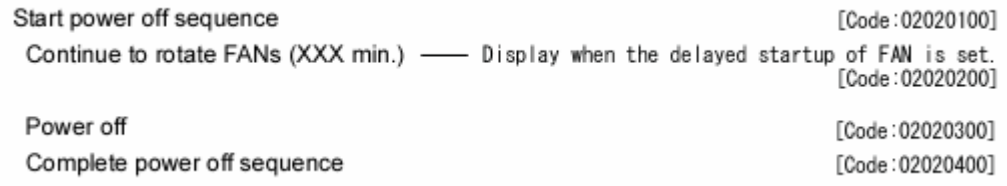
Start power off sequence [Code:02020100]
Continue to rotate FANs (XXX min.) —— Display when the delayed startup of FAN is set.
[Code:02020200]
Power off [Code:02020300]
Complete power off sequence [Code:02020400]

Figure A-3 Normal power-off messages

4.Normal reset messages

The following information message is displayed on the OS console when a normal reset is performed.

Figure A-4 Normal reset messages

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5.FATAL log collection messages

XSCF collects a log when a FATAL CPU error has occurred. At that time, the following FATAL log collection messages is displayed on the OS console.

```
Getting SC Register data              (SC   : register data getting)   *1          [Code:0E040100]
Getting XB#X Register data            (XB#X : register data getting) *1          [Code:0E040200]
Getting CPU#X some scan data          (CPU#X: sk/hk data getting)   *1           [Code:0E040300]
Getting SC History data (about XXX sec.)   (SC   : history  data getting) *1     [Code:0E040400]
Getting CPU#X History data (about XXX sec.)  (CPU#X: history  data getting) *1
                                                                                 [Code:0E040500]
Getting CPU#X All Scan data           (CPU#X: all scan data getting) *1          [Code:0E040600]
Getting SC All Scan data              (SC   : all scan data getting)   *1        [Code:0E040700]
Getting XB#X All Scan data            (XB#X : all scan data getting)  *1         [Code:0E040800]
Getting U2P#X All Scan data           (U2P#X: all scan data getting) *1          [Code:0E040900]
Log completed                    (Log get complete or No message) *1             [Code:0E040A00]
```

*1 The parentheses contains a message at HCP version 0106 or before.

Figure A-5 FATAL log collection messages

Note:
The above messages has some which are not displayed depending on a factor. The last one of the messages in figure A-5 is displayed whenever each message sequence ended.

6. Power on suppression messages

The following information message is displayed on the OS console when XSCF suppresses the power-on.

```
Power-on abort:Error mail received   *1                                  [Code:02011100]
Power-on abort:Error rose in Power-on sequence  *1                       [Code:02011200]
Power-on abort:After emergency Power-off                                 [Code:02011300]
    (Power-on abort:Emergency Power-Off from RCI thread had risen)   *2
Power-on abort:RCI error occurred                                        [Code:02011400]
    (Power-on abort:RCI Hardware error had risen) *2
Power-on abort:Power-off sequence running                                [Code:02011600]
Power-on abort:Mode switch permission not allowed                        [Code:02011700]
Power-on abort:Power control mode disable                                [Code:02011800]
Power-on abort:UPA frequency is out of range                             [Code:02011900]
  (Power-on abort:UPA frequency expectant value is out of range) *2
```

*1 This is a message at HCP version 0504 or before. And it is not displayed at HCP version 0601 or later.

*2 The parentheses contains a message at HCP version 0504 or before.

Figure A-6 Power on suppression messages

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7. Control execution messages during the monitoring for foreseeable faults

The following information message is displayed on the OS console when XSCF does a necessary control during the system monitoring.

The following example is message for the server cooling, the XSCF does the server power-off, and power-on again.

Figure A-7 Control execution messages during the monitoring for foreseeable faults

Next: A.2 Messages in Each Function

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A.2 Messages in Each Function

This section explains how to read typical messages displayed or logged by each of the XSCF functions.

Messages output on standard console (OS console)

The following explains typical messages displayed on the standard console (OS console) when XSCF detects a server error.

Three examples of messages displayed when an error has been detected or the status is being reported are given below.

Example 1 : Jul 25 17:07:34 JST 2002 XSCF:A:PSU:[c2010100] PSU#n input failure

Example 2 : Jul 25 17:07:34 JST 2002 XSCF:W:SB:[c5340000] NVRAM CALENDER invalid data

Example 3 : Jul 25 17:07:34 JST 2002 XSCF:I::[02000000] Start power on sequence

Each line has the following format:

Mnn DD hh:mm:ss XXX YYYY XSCF:Z:xxxx:[nnnnnnnn] Message

- Mnn : First three letters of month in English
- DD : Day of the month.
- hh:mm:ss : Hour (24-hour clock):minute:second
- XXX : TimeZoneName
- YYYY : Year (four-digit year)
- XSCF : Component name
- Z : System fault level
  - A : Alarm (Fatal problem for system)
  - W : Warning (Serious problem, but system can keep working)
  - N : Notice (notification)
  - I : Information (notification)
- xxxx : Indicates the faulty part.
  - If the fault level is I, none is displayed. And no errorlog.
- [nnnnnnnn] : Eight-digit specific error code.
- Message : Error message up to 48 characters described in the previous section.

Additionally, system messages and other specific detailed messages are displayed.

For information about error codes and error messages, see "Appendix B XSCF Log Information".

Messages output as a mail report

When a server error is detected, the XSCF mail function sends a report to the user. The mail message includes both the system messages and error messages described in the previous section.

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For an example of an actually displayed mail message, see "Chapter 8 XSCF Mail Function".

Messages output by SNMP agent function

When a server error is detected, the XSCF SNMP agent function generates a trap. The SNMP message contains the error messages.

For an example of an actually displayed mail message, see "Chapter7 XSCF SNMP Agent Function".

Messages output by the XSCF Web function

The XSCF Web function has a menu to display logs. When you find any abnormality on XSCF Web, such as the CHECK LED on the remote panel blinks, you may want to check the log.

By selecting a log on XSCF Web, you can see system message and error message with detail information.

Messages output to the XSCF shell terminal

When the user logs in to XSCF from a terminal that can use the XSCF shell, messages are displayed on the initial screen. When the CHECK LED on the operator panel and remote panel blinks or a server error is recognized on the standard console (OS console), the XSCF show-error-logs command can be used to display system messages and error massages together with other specific messages.

For display examples and more information about the initial message and XSCF command messages, see "Chapter6 How to Use the XSCF Command Shell" and "Appendix B XSCF Log Information".

Next: "Appendix B XSCF Log Information"

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Appendix B XSCF Log Information

Appendix B describes the following XSCF log information, which can be viewed on the XSCF console using XSCF commands:

- Error logs (viewed with the show-error-logs command)
- Power logs (viewed with the show-power-logs command)
- Event logs (viewed with the show-event-logs command)

This appendix has the following contents.

Contents:

B.1 XSCF Error Log List and Actions B-2
B.2 XSCF Power Logs List B-63
B.3 XSCF Event Logs List B-70
B.4 XSCF Error Code Table B-77

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B.1 XSCF Error Log List and Actions

This section lists all error log information displayed when the show-error-logs command is executed on the XSCF console. The table below explains the items in the error log list. For information about a command to display logs and options to the command, see "Chapter6 How to Use the XSCF Command Shell". To view logs by error code, use "XSCF Error Code Table" in Section B.4.

Table B-1-1 How to read the error log list

Error code	Unique hexadecimal number identifying the error
Message	Error message
Explanation	Explains the meaning of the message.
Replacement part/number	Indicates the part to be replacement and its part number. Examples: When "FF: -/FF"described、replacement part cannot specified. When "41: PSU/0-2"described、category number is 41 and replacement part is PSU and Number is 0 to 2. Please refer to Table B-1-P about parts number.
Action	Action to be taken.
Error level	Shows a level that indicates the extent of the effects of the error on the system. The following three error levels are reported: **A: Alarm (Fatal problem for system)** The system cannot continue operation. — (EPOFF) : Emergency power off. — (STOP) : Emergency shutdown. — (UNABLE TO START) : The system could not be started. Contact the system administrator or a FE. **W: Warning** (**Serious problem, but system can keep working**) The system can continue operation, but there is a problem with the configuration. Contact a FE. **N: Notice (notification)** The message reports an event such as a change in installation environment. This does not mean a problem.
Report level:	Shows whether an automatic report is done to the REMCS center when the system detects an error concerned. The service contract is separately necessary for a remote control from the REMCS center. Only when the service contract is made and ESF is set correctly concerning REMCS, an automatic reporting is done. There are two report levels: **3 :** There is a serious problem with a part or a system warning has occurred. Reporting is done. **0 :** There is no problem, and reporting is not done.
Error detection source:	The hardware which detects an error. There are "XSCF","POST", "OBP" and "Machine Administration".

A list of errors for each error level recorded in the error log is provided below.

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Alarm

The following table lists alarm-level errors (errors that prevent the continuation of system operation) and the actions to be taken.

To view errors by error code, use "XSCF Error Code Table" in Section B.4.

Alarm[1] Alarm[2] Alarm[3] Warnig[1] Warnig[2] Warnig[3] Warnig[4] Notice[1] Notice[2] Notice[3] Notice[4]

Table B-1-2 Alarm-level errors[1]

Error code	Message and explanation
4201010n	**Message:** PSU#n ACFAIL (When the input power source is the AC Type.) PSU#n input failure (When the input power source is the DC Type.) **Explanation:** Input power source failure (power supply not redundant) was detected. **Replacement part/number:** 41:PSU/0-2 **Action:** Check the installation environment. (Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0800000	**Message:** SCF-CPU Illegal Critical input interrupt **Explanation:** An illegal interrupt occurred. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0800100	**Message:** SCF-CPU Illegal Machine check interrupt **Explanation:** An illegal interrupt occurred. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0800200	**Message:** SCF-CPU Illegal Data storage interrupt **Explanation:** An illegal interrupt occurred. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0800300	**Message:** SCF-CPU Illegal Instruction storage interrupt **Explanation:** An illegal interrupt occurred. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0800400	**Message:** SCF-CPU Illegal External interrupt **Explanation:** An illegal interrupt occurred. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0800500	**Message:** SCF-CPU Illegal Alignment interrupt **Explanation:** An illegal interrupt occurred. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF

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C0800600	**Message:** SCF-CPU Illegal Program interrupt **Explanation:** An illegal interrupt occurred. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0800700	**Message:** SCF-CPU Illegal System call interrupt **Explanation:** An illegal interrupt occurred. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0800800	**Message:** SCF-CPU Illegal PIT interrupt **Explanation:** An illegal interrupt occurred. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0800900	**Message:** SCF-CPU Illegal FIT interrupt **Explanation:** An illegal interrupt occurred. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0800A00	**Message:** SCF-CPU Illegal WDT interrupt **Explanation:** An illegal interrupt occurred. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0800B00	**Message:** SCF-CPU Illegal Data TLB miss interrupt **Explanation:** An illegal interrupt occurred. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0800C00	**Message:** SCF-CPU Illegal Instruction TLB miss interrupt **Explanation:** An illegal interrupt occurred. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0800D00	**Message:** SCF-CPU Illegal Debug interrupt **Explanation:** An illegal interrupt occurred. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0801000	**Message:** SYSTEM CONTROL BUS data transfer error **Explanation:** A data transfer error was detected on the system control bus. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0801100	**Message:** SYSTEM CONTROL BUS data transfer timeout error **Explanation:** A data transfer timeout was detected on the system control bus. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF

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C0801200	**Message:** SYSTEM CONTROL BUS data transfer incomplete **Explanation:** A data transfer interrupt was detected on the system control bus. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0802000	**Message:** TOD/NVRAM compare error **Explanation:** A compare error was detected in NVRAM (TOD). **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0803000	**Message:** SCF-SDRAM compare error **Explanation:** A compare error was detected in SCF-SDRAM. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0803100	**Message:** SCF-SDRAM uncorrectable error **Explanation:** An ECC UE was detected in SCF-SDRAM. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0803200	**Message:** SCF-SDRAM correctable error **Explanation:** An ECC CE was detected in SCF-SDRAM. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0804000	**Message:** SCFC parity error **Explanation:** A parity error was detected in the SCFC. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0804100	**Message:** SCFC parity test error **Explanation:** A parity detection function error was detected in the SCFC. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0805000	**Message:** XSCF(current bank) checksum error **Explanation:** The checksum for the current bank in SCF-FMEM is defferent from one, which is stored before swtiching of bank. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0805300	**Message:** XSCF boot header error **Explanation:** A boot header identifier error was detected in SCF-FMEM. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0806000	**Message:** SCF-CPU PIT timeout error **Explanation:** A PIT interrupt did not occur in the SCF-CPU. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF

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C0806100	**Message:** SCF-CPU WDT timeout error **Explanation:** A WDT interrupt did not occur in the SCF-CPU. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0807000	**Message:** SCF-SDRAM ECC CE test error **Explanation:** ECC did not detect a correctable error in SCF-SDRAM. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0807100	**Message:** SCF-SDRAM ECC CE test compare error **Explanation:** ECC corrected a correctable error in SCF-SDRAM, but the correction was incorrect. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0807200	**Message:** SCF-SDRAM ECC UE test error **Explanation:** ECC did not detect an uncorrectable error in SCF-SDRAM. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0808000	**Message:** UART loop-back error **Explanation:** A data receive timeout was detected. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0808100	**Message:** UART compare error **Explanation:** A transmission data compare error was detected. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C0809200	**Message:** TOD error **Explanation:** A calendar operation error was detected. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C080F000	**Message:** SCF-CPU reset retry out **Explanation:** SCF cannot complete its resetting, properly. or WDT reset failed. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C1000100	**Message:** System hangup(RESET) **Explanation:** A startup monitoring timeout error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB or CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C1000200	**Message:** System hangup(OBP) **Explanation:** An OBP monitoring timeout error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB or CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF

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C1001100	**Message:** System hangup(OS) Level=1 **Explanation:** An interrupt ACK monitoring error was detected while OS was working. **Replacement part/number:** FF:-/FF **Action:** Check the Software by the panic dump. (Replace the SB or CPU.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C1001200	**Message:** System hangup(OS) Level=2 **Explanation:** An interrupt ACK monitoring error was detected while OS was not working. Or after an interrupt ACK monitoring error was detected, panic failed. **Replacement part/number:** FF:-/FF **Action:** Check the Software by the XIR log. (Replace the SB or CPU.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C1001300	**Message:** System hangup(OS) Level=3 **Explanation:** An interrupt ACK monitoring error was detected while OS was not working. Or after an interrupt ACK monitoring error was detected, panic and getting information failed. **Replacement part/number:** FF:-/FF **Action:** Check the Software by the Console log. (Replace the SB or CPU.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C201020n	**Message:** PSU#n failed **Explanation:** A power supply error (power supply not redundant) was detected. **Replacement part/number:** 41:PSU/0-2 **Action:** Replace the PSU. (Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C201030n	**Message:** PSU#n PWOK error **Explanation:** An output voltage error was detected. **Replacement part/number:** 41:PSU/0-2 **Action:** Replace the PSU. (Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C2010400	**Message:** PSU mount error **Explanation:** An uninstalled PSU (power supply not redundant) was detected. **Replacement part/number:** 41:PSU/0-2 **Action:** Install the missing PSU. (Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C20106FF	**Message:** PSU configuration error **Explanation:** The number of PSUs is incorrect. **Replacement part/number:** FF:-/FF **Action:** Check the PSU configuration. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF

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C20107FF (Alarm)	**Message:** PSU type is not proper #0-DC,#1-DC,#2-AC **Explanation:** The type of PSU is not appropriate. **Replacement part/number:** FF:-/FF **Action:** Check the PSU configuration. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C202010n	**Message:** DDC-A not mounted **Explanation:** The DDC-A is not installed. **Replacement part/number:** 43: DDC-A/0 **Action:** Install the DDC-A. (Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C202020n	**Message:** CPUDDC not mounted **Explanation:** The CPUDDC is not installed. **Replacement part/number:** 42: CPUDDC/ 0-3 **Action:** Replace the CPU. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C202030n	**Message:** DDC-A#n alarm **Explanation:** A DDC-A device error was detected. **Replacement part/number:** 43: DDC-A/0 **Action:** Replace the DDC-A. (Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C202040n	**Message:** DDC-B#n alarm **Explanation:** A DDC-B device error was detected. **Replacement part/number:** 44: DDC-B/0 **Action:** Replace the DDC-B. (Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C202050n	**Message:** CPUDDC#n alarm **Explanation:** A CPUDDC device error was detected. **Replacement part/number:** 42: CPUDDC/ 0-3 **Action:** Replace the CPU. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C202060n	**Message:** DDC-B not mounted **Explanation:** The DDC-B is not installed. **Replacement part/number:** 44: DDC-B/0 **Action:** Install the DDC-B. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C20301FF	**Message:** CPU not mounted **Explanation:** The CPU is not installed. **Replacement part/number:** 11: CPU/ FF **Action:** Install the CPU. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C20302FF	**Message:** ALL CPUs are degraded **Explanation:** ALL CPUs degradation was detected. **Replacement part/number:** 11: CPU/ FF **Action:** Replace the CPU. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C203030n	**Message:** Illegal CPU **Explanation:** Unsupported CPU was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:0/:XSCF

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C2111000	**Message:** Pon sequence timeout(sectionXX) .status:YY **Explanation:** A power on sequence timeout was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C2111100	**Message:** Poff sequence timeout(sectionXX) **Explanation:** A power off sequence timeout was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C2111200	**Message:** Reset sequence timeout(sectionXX) .status:YY **Explanation:** A reset sequence timeout was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB or CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C2120100	**Message:** System(POWER ON) Retry out **Explanation:** OFF/ON retries exceeded the limit. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C2120200	**Message:** System(FATAL) Retry out **Explanation:** Retries against fatal error exceeds the limit. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB or CPU. Or for model 450-Q: Replace the PCI-board. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C2120300	**Message:** System(RESET) Retry out **Explanation:** Retries, caused by timeout of system starting up by reset, exceeds the limit. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB or CPU. Or for model 450-Q: Replace the PCI-board. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C2120400	**Message:** System(PON SEQUENCE) Retry out **Explanation:** Retries, caused by timeout of system starting up by power-on, exceeds the limit. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB or CPU. Or for model 450-Q: Replace the PCI-board. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C2130100	**Message:** Unknown SB-TYPE(XXXXXXXX) **Explanation:** The SB type is not supported. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C2130300	**Message:** UPA frequency expectant value is out of range **Explanation:** UPA clock frequency value is abnorrmal. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF

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C2130400	**Message:** Pon sequence error(sectionXX) .status:YY **Explanation:** A power-on sequence error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C306000n	**Message:** THERMAL-SENSOR#n(CPU) access error **Explanation:** The system control bus detected an access error. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB or CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C306020n	**Message:** CPU#n thermal alarm(shutdown) xxC **Explanation:** An abnormal temperature was detected on the CPU. **Replacement part/number:** 11:CPU/0-3 **Action:** Replace the CPU. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C306030n	**Message:** CPU#n thermal alarm(epoff) xxC **Explanation:** An abnormal temperature was detected on the CPU. **Replacement part/number:** 11:CPU/0-3 **Action:** Replace the CPU. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C30B000n	**Message:** HARDWARE-MONITOR#n access error **Explanation:** The system control bus detected an access error. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C30B020n	**Message:** PSU#n xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage was detected. **Replacement part/number:** 41: PSU/0-2 **Action:** Replace the PSU. (Or Replace the SB. Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C30B0600	**Message:** DDC-B xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage was detected. **Replacement part/number:** 44: DDC-B/0 **Action:** Replace the DDC-B. (Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C30B0A0n	**Message:** DDC-A#n xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage was detected. **Replacement part/number:** 43: DDC-A/0 **Action:** Replace the DDC-A. (Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C30B0C00	**Message:** DDC-C#n xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage was detected. **Replacement part/number:** 01: SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF

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C30B0E0n	**Message:** PSU#n xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage was detected. **Replacement part/number:** 41: PSU/0-2 **Action:** Replace the PSU. (Or Replace the SB. Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C30B100n	**Message:** PSU#n xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage was detected. **Replacement part/number:** 41: PSU/0-2 **Action:** Replace the PSU. (Or Replace the SB. Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C30B120n	**Message:** PSU#n xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage was detected. **Replacement part/number:** 41: PSU/0-2 **Action:** Replace the PSU. (Or Replace the SB. Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C30B140n	**Message:** CPUDDC#n xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage was detected. **Replacement part/number:** 42: CPUDDC/ 0-3 **Action:** Replace the CPU. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C30C0000	**Message:** SC access error **Explanation:** The system control bus detected an access error. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C30C0100	**Message:** SC PLL lock error **Explanation:** A PLL lock error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C30D000n	**Message:** XB#n access error **Explanation:** The system control bus detected an access error. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C30D010n	**Message:** XB#n PLL lock error **Explanation:** A PLL lock error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF

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C30E010n (Alarm)	**Message:** FAN-CONTROLLER#n access error **Explanation:** A system control bus access error (bus-configuration not redundant) was detected. **Replacement part/number:** 01:SB/00 (model 250-R), 32:FANJT/0-1 (FAN#0-3 of model 250-R4/250-P/450-R/450-Q) 03:PCI-BD/00 (FAN#4-7 of model 450-R/450-Q) **Action:** For model 250-R: Replace the SB. For models 250-R4/250-P/450-R/450-Q: Replace the SB if fan from #0 to #3 is specified. For model 450-Q: Replace the PCI board if fan from #4 to #7 is specified. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C30E030n	**Message:** FAN#n alarm (xxxxrpm) **Explanation:** An abnormal fan speed (fan-configuration not redundant) was detected. **Replacement part/number:** 31:FAN/0-7 **Action:** Replace the fan. (Or Do the action of the above "FAN-CONTROLLER#n".) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C30E050n	**Message:** FAN#n not mounted **Explanation:** A fan is not installed (fan-configuration not redundant).. **Replacement part/number:** 31:FAN/0-7 **Action:** Install the missing FAN. (Or Do the action of the above "FAN-CONTROLLER#n".) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C3160300	**Message:** SB serial number is 0 **Explanation:** The SB serial number was all 0s. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C3160400	**Message:** PANEL serial number is 0 **Explanation:** The PANEL serial number was all 0s. **Replacement part/number:** 02: PANEL/ 00 **Action:** Replace the panel. (Or for models 250-R4/250-P/450-R/450-Q: Replace the IO-back panel. Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
C3170000	**Message:** Unsupported SB-Revision (xxxxxxxxxxxx xxxxx) **Explanation:** An SB revision with an unsupported is installed. **Replacement part/number:** 01: SB/ 00 **Action:** Upgrade appropriate firmware. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CD000600	**Message:** Unknown SCF-FMEM ID(ID=xx TYPE=xx) **Explanation:** An SCF-FMEM with an unsupported ID/type is installed. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE01000n	**Message:** CPU#n JTAG IR setting error **Explanation:** A JIR setting error was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF

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CE02000n	**Message:** CPU#n JTAG compare error **Explanation:** A setting data compare error was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE03000n	**Message:** CPU#n JTAG status error **Explanation:** A JTAG status timeout was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE0301FF	**Message:** CPU JTAG status error **Explanation:** A JTAG status timeout was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE030200	**Message:** SC JTAG status error **Explanation:** A JTAG status timeout was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE0303FF	**Message:** XB#0-2 JTAG status error **Explanation:** A JTAG status timeout was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE0304FF	**Message:** XB#3-5 JTAG status error **Explanation:** A JTAG status timeout was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE03050n	**Message:** U2P#n JTAG status error **Explanation:** A JTAG status timeout was detected. **Replacement part/number:** 01: SB/ 00 **Action:** For models 250-R4/250-R/250-P/450-R: Replace the SB. For model 450-Q: Replace the PCI board if U2P#0's error . (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE04000n	**Message:** CPU#n JTAG ID code error **Explanation:** An ID code error was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE040100	**Message:** SC JTAG ID code error **Explanation:** An ID code error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE04020n	**Message:** XB#n JTAG ID code error **Explanation:** An ID code error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF

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CE04030n	**Message:** U2P#n JTAG ID code error **Explanation:** An ID code error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** For models 250-R4/250-R/250-P/450-R: Replace the SB. For model 450-Q: Replace the PCI board if U2P#0's error . (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE07100n	**Message:** Correct. error count over flow(offline desired) **Explanation:** The CPU is degraded because too many ECC correctable errors are detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
CE080000	**Message:** SYSTEM CONTROL BUS fatal timeout(SC Register) **Explanation:** SYSTEM CONTROL BUS timeout error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE09000n	**Message:** SYSTEM CONTROL BUS fatal timeout(XB#n Register) **Explanation:** SYSTEM CONTROL BUS timeout error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE0A0000	**Message:** SYSTEM CONTROL BUS fatal timeout(SC History) **Explanation:** SYSTEM CONTROL BUS timeout error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE20010n	**Message:** Processor fatal error(xxxxxxxx) **Explanation:** A CPU fatal error occurred. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE20020n	**Message:** Invalid adrs. error(00000000) **Explanation:** A CPU fatal error occurred. The cause may be due to software. **Replacement part/number:** 01: SB/ 00 or 11: CPU/ 0-3 **Action:** Replace the CPU or SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE20040n	**Message:** Invalid interrupt error(xxxxxxxx) **Explanation:** A CPU fatal error occurred. The cause may be due to software. **Replacement part/number:** 01: SB/ 00 or 11: CPU/ 0-3 **Action:** Replace the CPU or SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE200700	**Message:** DTAG error(xxxxxxxx) **Explanation:** A fatal error occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE200900	**Message:** Cache coherent error(xxxxxxxx) **Explanation:** A fatal error occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF

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CE201000	**Message:** UPA I/O fatal error IO#0(xxxxxxxx) **Explanation:** A fatal error occurred. **Replacement part/number:** 01: SB/ 00 **Action:** For models 250-R4/250-R/250-P/450-R: Replace the SB. For model 450-Q: Replace the PCI board. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE201200	**Message:** UPA I/O fatal error IO#2(xxxxxxxx) **Explanation:** A fatal error occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE201300	**Message:** UPA I/O fatal error IO#3(xxxxxxxx) **Explanation:** A fatal error occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE20150n	**Message:** Interconnect data error(xxxxxxxx) **Explanation:** A fatal error occurred. **Replacement part/number:** 11: CPU/ 0-3 or 01: SB/ 00 **Action:** For the Replacement part is CPU: Replace the CPU. (Or Replace the SB.) For the Replacement part is SB: Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE209400	**Message:** Fatal error(SC) **Explanation:** Logging errors when a fatal error occurs. **Replacement part/number:** FF:-/FF **Action:** Please check the errors occurred before or after. Then perform it as follow. Replace the SB or CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE209500	**Message:** Fatal error(XB) **Explanation:** Logging errors when a fatal error occurs. **Replacement part/number:** FF:-/FF **Action:** Please check the errors occurred before or after. Then perform it as follow. Replace the SB or CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE209600	**Message:** Fatal error(CPU#n,mm) **Explanation:** Logging errors when a fatal error occurs. (mm is detail code.) **Replacement part/number:** FF:-/FF **Action:** Please check the errors occurred before or after. Then perform it as follow. Replace the SB or CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE209700	**Message:** RC data error(yy)(xxxxxxxx) **Explanation:** RC data errors caused a fatal error. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. However, if the error occurred after a failure to upgrade firmware, retry the upgrade. If the upgrade still fails, replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE209800	**Message:** Hardware too many errors(xxxxxxxx) **Explanation:** Analysis is not possible because there are too many error factors. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF

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CE209900	**Message:** Hardware no error region(xxxxxxxx) **Explanation:** Analysis is not possible because there are no error factors. **Replacement part/number:** FF: -/ FF **Action:** Replace the SB or CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE20F10n	**Message:** Fatal error(Internal)(xxxxxxxx) **Explanation:** A fatal error occurred. **Replacement part/number:** 11: CPU/0-3 or 01: SB/00 **Action:** For the Replacement part is CPU: Replace the CPU. (Or Replace the SB.) For the Replacement part is SB: Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE20F200	**Message:** Fatal error(Outside)(xxxxxxxx) **Explanation:** A fatal error occurred. **Replacement part/number:** 01: SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
CE20FB00	**Message:** Bus protocol error(xxxxxxxx) **Explanation:** A fatal error occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF

(*x): yyyy: device address.

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Table B-1-3 Alarm-level errors[2]

Error code	Message and explanation
020000F2	**Message:** System Config. Error(No CPU(fail)) **Explanation:** No CPU is operational. This could happen when OS degrades all CPU's. **Replacement part/number:** FF: -/FF **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:POST
0300003A	**Message:** flash memory check sum error(FROM#0) **Explanation:** A flash memory checksum error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:POST
0300003B	**Message:** flash memory check sum error(FROM#1) **Explanation:** A flash memory checksum error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:POST
0310003C	**Message:** SRAM Data Line error(SRAM) **Explanation:** A SRAM data line error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:POST
0320003C	**Message:** SRAM Address Line error(SRAM) **Explanation:** A SRAM address line error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:POST

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0330003C	**Message:** SRAM Data error(SRAM) **Explanation:** A SRAM data error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:POST
04000031	**Message:** SC Register error(SC) **Explanation:** A SC register error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:POST
05000032	**Message:** SCF check error(SCF) **Explanation:** A XSCF reset timeout was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:POST
05010032	**Message:** SCF check error(SCF) **Explanation:** A XSCF status error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:POST
10000030	**Message:** DTAG error(DTAG) **Explanation:** A DTAG error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:POST
10010030	**Message:** DTAG error(DTAG) **Explanation:** A DTAG error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:POST
10100030	**Message:** DTAG Init error(DTAG) **Explanation:** At the initialization of DTAG, an error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:POST

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Table B-1-4 Alarm-level errors[3]

Error code	Message and explanation
1100000n	**Message:** [RST]initialization failed **Explanation:** Initialization of the OBP failed. [RST=Reset phase] **Replacement part/number:** 11: CPU/ 0-3 or 01: SB/ 00 or FF: -/FF **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
1108020n	**Message:** [RST]Watchdog reset **Explanation:** A watchdog reset occurred. [RST=Reset phase] **Replacement part/number:** 11: CPU/ 0-3 or FF: -/FF **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
1108050n	**Message:** [RST]RED state exception **Explanation:** A RED state occurred. [RST=Reset phase] **Replacement part/number:** 11: CPU/ 0-3 or FF: -/FF **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
1108TT00 (TT=trap type number)	**Message:** [RST]Trap occurred **Explanation:** An illegal trap error occurred. [RST=Reset phase] **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP

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120000FF	**Message:** [BI1]initailization failed **Explanation:** Initialization of the OBP failed. [BI1=Initialization-1 phase] **Replacement part/number:** FF: -/FF or 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:0/:OBP
1300000X	**Message:** [BI2]initialization failed **Explanation:** Initialization of the OBP failed. [BI2=Initialization-2 phase] **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
140000FF	**Message:** [L1]initailization failed **Explanation:** Initialization of the OBP failed. [L1=Initialization-3 phase] **Replacement part/number:** FF: -/FF or 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:0/:OBP
1500000X	**Message:** [U2P]initailization failed **Explanation:** Initialization of the OBP failed. [U2P=U2P node phase] **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
1600000X	**Message:** [CTIMER]initialization failed **Explanation:** Initialization of the OBP failed. [CTIMER=Timer node phase] **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
1700000X	**Message:** [BEBUS]Probing Basic ebus device failed **Explanation:** Initialization of the OBP failed. [BEBUS=Required ebus node phase] **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
1800000X	**Message:** [OBPENV]initialization failed **Explanation:** Initialization of the OBP failed. [OBPENV=About EEPROM phase] **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
1810003D	**Message:** [OBPENV]eeprom data invalid(set-default) **Explanation:** Abnormality is detected in the panel EEPROM, where environment variables of OBP are stored. [OBPENV=About EEPROM phase] **Replacement part/number:** 02: PANEL/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
1820003D	**Message:** [OBPENV]eeprom data invalid **Explanation:** Abnormality is detected in the panel EEPROM, where system ID information is stored. [OBPENV=About EEPROM phase] **Replacement part/number:** 02: PANEL/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
190000FF	**Message:** [EEBUS]Probing Extended ebus device failed **Explanation:** Initialization of the OBP failed. [EEBUS=Ebus node phase] **Replacement part/number:** FF: -/FF or 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
1A00000n	**Message:** [CPU]Probing CPU failed **Explanation:** CPU failed while Initialization of the OBP. [CPU=CPU node phase] **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. Then contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP

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1A0000FF	**Message:** [CPU]Probing CPU failed **Explanation:** Initialization of the OBP failed. [CPU=CPU node phase] **Replacement part/number:** FF: -/FF or 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
1B0000FF	**Message:** [NVRAMRC]initialization failed **Explanation:** Initialization of the OBP failed. [NVRAMRC=NVRAMRC execution phase] **Replacement part/number:** FF: -/FF **Action:** Please confirm the description of nvramrc. Then contact a FE. **Error level/report level/error detection source:** Alarm/:0/:OBP
1C00002n	**Message:** [PCI]Probing PCI failed(PCI#0n) **Explanation:** Trouble occurred while probing the PCI slot. [PCI=PCI probing phase] **Replacement part/number:** 92: PCI/ 00-08 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
1D00004n (n=0, 1)	**Message:** [SCSI]Probing PCI failed(SCSI#n) [(n, x)=(0, 1)、(1, 0)] **Explanation:** Trouble occurred while probing the SCSI. [SCSI=SCSI probing phase] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
1E0000XX (XX=42,43)	**Message:** [NET]Probing PCI failed(LAN#n) **Explanation:** Trouble occurred while probing the LAN. [NET=NET probing phase] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
1F000044	**Message:** [ATAPI]Probing PCI failed(ATAPI) **Explanation:** Trouble occurred while probing the IDE. [ATAPI=IDE probing phase] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
21000045	**Message:** [USB]Probing PCI failed(USB) **Explanation:** Trouble occurred while probing the USB. [USB=USB probing phase] **Replacement part/number:** 01: SB/ 00 **Action:** Please replace the USB device. (Or replace the SB.) Then contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
230000FF	**Message:** [CONS]install console failed **Explanation:** Trouble occurred in the console install processing. [CONS=Console setting phase] **Replacement part/number:** FF: -/ FF **Action:** Please confirm values of the OBP environment variable, boot-device. Then contact a FE. When you find any message in prior to this message, check the earlier message, first. **Error level/report level/error detection source:** Alarm/:3/:OBP
240000FF	**Message:** [SBinf]SBinf failed **Explanation:** SB configration information notification failed. [SBinf=Startup phase] **Replacement part/number:** FF: -/ FF **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:0/:OBP
250000FF	**Message:** [BOOTP]Boot Process failed **Explanation:** Boot process failed. [BOOTP=Boot phase1] **Replacement part/number:** FF: -/ FF or 91: DISK/ 0-5 **Action:** Please confirm values of the OBP environment variable,boot-device. Then contact a FE. Please follows that when another one is ahead of this message. **Error level/report level/error detection source:** Alarm/:3/:OBP

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250000FF -(2)	**Message:** [BOOTP]All boot devices failed **Explanation:** An error was detected in all boot-devices. [BOOTP=Boot phase1] **Replacement part/number:** FF: -/ FF **Action:** Please confirm values of the OBP environment variable,boot-device. Then contact a FE. **Error level/report level/error detection source:** Alarm/:0/:OBP
251000XX (*p)	**Message:** [BOOTP]disk label error **Explanation:** A disk label error was detected. [BOOTP=Boot phase1] **Replacement part/number:** 01: SB/ 00 or 92: PCI/ 00-08 or 91: DISK/ 0-5 **Action:** Please confirm whether Disk specified by OBP environment variable (or boot-device) is boot possible Disk(or CDROM). Then contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
252000XX (*p)	**Message:** [BOOTP]SCSI error **Explanation:** A disk boot error was detected. [BOOTP=Boot phase1] **Replacement part/number:** 01: SB/ 00 or 92: PCI/ 00-08 or 91: DISK/ 0-5 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
253000XX (*p)	**Message:** [BOOTP]SCSI I/O error **Explanation:** A disk boot error was detected. [BOOTP=Boot phase1] **Replacement part/number:** 01: SB/ 00 or 92: PCI/ 00-08 or 91: DISK/ 0-5 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
254000XX (XX=50-55)	**Message:** [BOOTP]PCI S-ERR **Explanation:** A PCI address parity error occurred. [BOOTP=Boot phase1] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
255000XX (XX=42,43)	**Message:** [BOOTP]network error(LAN#n) **Explanation:** A network boot error occurred. [BOOTP=Boot phase1] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
256000XX (XX=42,43)	**Message:** [BOOTP]network error(LAN#n) **Explanation:** A network boot error occurred. [BOOTP=Boot phase1] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
25700044	**Message:** [BOOTP]IDE error **Explanation:** A CDROM/DVD boot error occurred. [BOOTP=Boot phase1] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
260000FF	**Message:** [BOOTB]Boot block error **Explanation:** Execution of the boot block was abnormally terminated. [BOOTB=Boot block phase] **Replacement part/number:** FF: -/ FF **Action:** It might not be a correct disk. Please confirm the disk. **Error level/report level/error detection source:** Alarm/:0/:OBP
261000XX (*p)	**Message:** [BOOTB]disk label error **Explanation:** A disk label error was detected. [BOOTB=Boot block phase] **Replacement part/number:** 01: SB/ 00 or 92: PCI/ 00-08 or 91: DISK/ 0-5 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
262000XX (*p)	**Message:** [BOOTB]SCSI error **Explanation:** A disk boot error was detected. [BOOTB=Boot block phase] **Replacement part/number:** 01: SB/ 00 or 92: PCI/ 00-08 or 91: DISK/ 0-5 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP

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263000XX (*p)	**Message:** [BOOTB]SCSI I/O error **Explanation:** A disk boot error was detected. [BOOTB=Boot block phase] **Replacement part/number:** 01: SB/ 00 or 92: PCI/ 00-08 or 91: DISK/ 0-5 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
264000XX (XX=50-55)	**Message:** [BOOTB]PCI S-ERR **Explanation:** A PCI address parity error occurred. [BOOTB=Boot block phase] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
265000XX (XX=42,43)	**Message:** [BOOTB]network error(LAN#n) **Explanation:** A network boot error occurred. [BOOTB=Boot block phase] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
266000XX (XX=42,43)	**Message:** [BOOTB]network error(LAN#n) **Explanation:** A network boot error occurred. [BOOTB=Boot block phase] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
270000FF	**Message:** [BOOTOS]Boot OS failed **Explanation:** Initialization of OS on the OBP environment was abnormally terminated. [BOOTOS=OS phase] **Replacement part/number:** FF: -/ FF **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:0/:OBP
271000XX (*p)	**Message:** [BOOTOS]disk label error **Explanation:** A disk label error was detected. [BOOTOS=OS phase] **Replacement part/number:** 01: SB/ 00 or 92: PCI/ 00-08 or 91: DISK/ 0-5 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
272000XX (*p)	**Message:** [BOOTOS]SCSI error **Explanation:** A disk boot error was detected. [BOOTOS=OS phase] **Replacement part/number:** 01: SB/ 00 or 92: PCI/ 00-08 or 91: DISK/ 0-5 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
273000XX (*p)	**Message:** [BOOTOS]SCSI I/O error **Explanation:** A disk boot error was detected. [BOOTOS=OS phase] **Replacement part/number:** 01: SB/ 00 or 92: PCI/ 00-08 or 91: DISK/ 0-5 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
274000XX (XX=50-55)	**Message:** [BOOTOS]PCI S-ERR **Explanation:** A PCI address parity error occurred. [BOOTOS=OS phase] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
275000XX (XX=42,43)	**Message:** [BOOTOS]network error(LAN#n) **Explanation:** A network boot error occurred. [BOOTOS=OS phase] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
276000XX (XX=42,43)	**Message:** [BOOTOS]network error(LAN#n) **Explanation:** A network boot error occurred. [BOOTOS=OS phase] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP

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280000FF	**Message:** [OSRUN]OS Running OBP failed **Explanation:** An OBP call was not completed whille OS runninng. [OSRUN=OS running phase] **Replacement part/number:** FF: -/ FF **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:0/:OBP
281000FF	**Message:** [OSRUN]OS Running OS abort **Explanation:** Control is moved to OBP because OS gave up managing any serious trouble. [OSRUN=OS running phase] **Replacement part/number:** FF: -/ FF **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:0/:OBP
281000XX (*p)	**Message:** OS aborted **Explanation:** Control is moved to OBP because OS gave up managing any serious trouble. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
2A0000FF	**Message:** [POFF]Power off sequence failed **Explanation:** Power off sequence failed. [POFF=Power off phase] **Replacement part/number:** FF: -/ FF **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:0/:OBP
2B0000FF	**Message:** [REBOOT]Reboot sequence failed **Explanation:** Reset sequence failed. [REBOOT=Reboot phase] **Replacement part/number:** FF: -/ FF **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:0/:OBP
2C0000FF	**Message:** [INIT0]Init 0 sequence failed **Explanation:** Problem is detected during shutting down to OBP. [INIT0=Init 0 phase] **Replacement part/number:** FF: -/ FF **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:0/:OBP
2E00000n	**Message:** [RED]RED State exception occurred **Explanation:** A RED state occurred. [RED=RED/WDR/XIR phase] **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
2E10000n	**Message:** [RED]Watchdog reset occurred **Explanation:** A watchdog reset occurred. [RED=RED/WDR/XIR phase] **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
2E200000	**Message:** [RED]Reset Switch **Explanation:** A Reset Switch was pressed. [RED=RED/WDR/XIR phase] **Replacement part/number:** FF: -/ FF **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
33000039	**Message:** [Autoboot stop]No Available TOD **Explanation:** A boot supression for abnormality of TOD time value. **Replacement part/number:** 01: SB/ 00 **Action:** There is a possibility of the illegal time setting. So, please set a time by "set-tod-all" command. Replace the SB when you will have the same message again after reboot. Contact a FE. **Error level/report level/error detection source:** Alarm/:0/:OBP
330000FF	**Message:** [Autoboot stop]Panel data Error **Explanation:** A boot supression for abnormality of the panel EEPROM data. **Replacement part/number:** FF: -/ FF **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:0/:OBP

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330000FF _(2)	**Message:** [Autoboot stop]RCI is not configured **Explanation:** A boot supression for non-configured RCI. **Replacement part/number:** FF: -/ FF **Action:** Please configure the RCI by "rci-config" and "rci-configio" command. Contact a FE. **Error level/report level/error detection source:** Alarm/:0/:OBP
FF0000FF	**Message:** Reset Switch **Explanation:** A CPU reset occurred and logs are recorded. **Replacement part/number:** FF: -/ FF **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
xx0000FF (*p)	**Message:** OBP initializing aborted **Explanation:** Initialization of OBP failed. **Replacement part/number:** FF: -/ FF **Action:** Please follows that when another one is ahead of this message. Contact a FE. **Error level/report level/error detection source:** Alarm/:0/:OBP
xx080ayy (*p)	**Message:** [ppp]Instruction Access Error **Explanation:** An illegal trap error occurred. **Replacement part/number:** 01: SB/ 00 or 11: CPU/ 0-3 or 21: SLOT/ 00-15 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
xx0810yy (*p)	**Message:** [ppp]Illegal instruction **Explanation:** An illegal trap error occurred. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
xx0832yy (*p)	**Message:** [ppp]Data Access Error **Explanation:** An illegal trap error occurred. **Replacement part/number:** 01: SB/ 00 or 11: CPU/ 0-3 or 21: SLOT/ 00-15 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
xx0864yy (*p)	**Message:** [ppp]Fast Instruction Access MMU Miss **Explanation:** An illegal trap error occurred. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP
xx0868yy (*p)	**Message:** [ppp]Fast Data Access MMU Miss **Explanation:** An illegal trap error occurred. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Alarm/:3/:OBP

(*p) xx:Test phase number, XX,yy:Component number, zzz:Component name, ppp:Phase abbreviation. Please refer to Table B-1-T and Table B-1-C for details.

Alarm Warnig Notice

Information

The content of the error messages might be changed because of the function improvement.

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Warning

The following table lists warning-level errors (e.g., errors in which operation can continue but in a degraded state) and the actions to be taken.

To view errors by error code, use "XSCF Error Code Table" in Section B.4.

Alarm[1] Alarm[2] Alarm[3] Warnig[1] Warnig[2] Warnig[3] Warnig[4] Notice[1] Notice[2] Notice[3] Notice[4]

Table B-1-5 Warning-level errors[1]

Error code	Message and explanation
4201010n	**Message:** PSU#n ACFAIL (When the input power source is the AC Type.) PSU#n input failure (When the input power source is the DC Type.) **Explanation:** Input power source failure (power supply remains redundant) was detected. **Replacement part/number:** 41: PSU/ 0-2 **Action:** Check the installation environment. (Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
4201040n	**Message:** PSU#n mount error **Explanation:** A PSU is not installed (power supply remains redundant). **Replacement part/number:** FF:-/FF **Action:** Check the PSU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
5080000n	**Message:** Parts Status Reset Failure **Explanation:** In Machine Administration Menu, the status of abnormal PSU was reset. **Replacement part/number:** 41:PSU/0-2 **Action:** Check the installation environment. (Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel. Or Replace the SB.) Or Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:0/:XSCF
80805100	**Message:** XSCF(reserved bank) checksum error **Explanation:** A reserved-bank checksum error was detected. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. However, if the error was detected during a firmware upgrade or after a failure to upgrade firmware, retry the upgrade. If the upgrade still fails, replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
80805400	**Message:** SCF-FMEM checksum error **Explanation:** Check sum error is detected in flash memory. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. However, if the error was detected during a firmware upgrade or after a failure to upgrade firmware, retry the upgrade. If the upgrade still fails, replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
80805600	**Message:** SCF-FMEM update unfinished **Explanation:** Update of firmware is not properly finished. **Replacement part/number:** 01:SB/00 **Action:** Retry the update. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF

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80809000	**Message:** TOD stop **Explanation:** Stop of calendar timer is detected. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
80809100	**Message:** TOD invalid data **Explanation:** Illegal value is detected on calendar timer. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
80809300	**Message:** NVRAM battery low **Explanation:** Low battery voltage was detected. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8201020n	**Message:** PSU#n failed **Explanation:** A power supply error (power supply remains redundant) was detected. **Replacement part/number:** 41: PSU/ 0-2 **Action:** Replace the PSU. (Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8201050n	**Message:** PSU#n warning **Explanation:** An alert was detected in a PSU. **Replacement part/number:** 41: PSU/ 0-2 **Action:** Replace the PSU. (Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
82050100	**Message:** NVRAM battery low **Explanation:** Low battery voltage was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
830101FF	**Message:** INLET thermal low warning **Explanation:** Low inlet temperature was detected. **Replacement part/number:** FF:-/FF **Action:** Check the installation environment. (Or Replace the panel. For models 250-R4/250-P/450-R/450-Q: Replace the IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
830104FF	**Message:** INLET thermal high warning **Explanation:** High inlet temperature was detected. **Replacement part/number:** FF:-/FF **Action:** Check the installation environment. (Or Replace the panel. For models 250-R4/250-P/450-R/450-Q: Replace the IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF

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83020100	**Message:** PANEL-FRU data error **Explanation:** An FRU data error in PANEL-EEPROM was detected. **Replacement part/number:** 02: PANEL/ 00 **Action:** Replace the panel. (For models 250-R4/250-P/450-R/450-Q: Replace the IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8306010n	**Message:** CPU#n thermal high warning **Explanation:** High CPU temperature was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
83080100	**Message:** SB-FRU data error **Explanation:** An FRU data error on the SB was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
830B010n	**Message:** PSU#n xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage was detected. **Replacement part/number:** 41: PSU/0-2 **Action:** Replace the PSU. (Or Replace the SB. Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
830B0500	**Message:** DDC-B xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage was detected. **Replacement part/number:** 44: DDC-B/0 **Action:** Replace the DDC-B. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
830B090n	**Message:** DDC-A xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage was detected. **Replacement part/number:** 43: DDC-A/ 0 **Action:** Replace the DDC-A. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
830B0B00	**Message:** DDC-C#n xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage was detected. **Replacement part/number:** 01: SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
830B0D0n	**Message:** PSU#n xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage was detected. **Replacement part/number:** 41: PSU/0-2 **Action:** Replace the PSU. (Or Replace the SB. Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF

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830B0F0n	**Message:** PSU#n xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage was detected. **Replacement part/number:** 41: PSU/0-2 **Action:** Replace the PSU. (Or Replace the SB. Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
830B110n	**Message:** PSU#n xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage error was detected. **Replacement part/number:** 41: PSU/0-2 **Action:** Replace the PSU. (Or Replace the SB. Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
830B130n	**Message:** CPUDDC#n xx.xxV(expect xx.xxV) **Explanation:** An abnormal voltage was detected. **Replacement part/number:** 42: CPUDDC/ 0-3 **Action:** Replace the CPU. (Or replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
830E000n	**Message:** FAN-CONTROLLER#n access warning **Explanation:** A system control bus access error (bus-configuration remains redundant) was detected. **Replacement part/number:** 01:SB/00 (model 250-R), 32:FANJT/0-1 (FAN#0-3 of model 250-R4/250-P/450-R/450-Q) 03:PCI-BD/00 (FAN#4-7 of model 450-R/450-Q) **Action:** For model 250-R: Replace the SB. For models 250-R4/250-P/450-R/450-Q: Replace the SB if fan from #0 to #3 is specified. For model 450-Q: Replace the PCI board if fan from #4 to #7 is specified. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8310010n	**Message:** CPU#n-FRU data error **Explanation:** An FRU data error on CPU#n was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. (Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8310020n	**Message:** Unknown CPU#n FRU-IDCODE xx, so using xx **Explanation:** Unknown CPU ID code was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. (Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8311000n	**Message:** SLOT#n-FRU access error **Explanation:** An FRU access error in SLOT#n was detected. **Replacement part/number:** 21: SLOT/ 00-15 **Action:** Replace the SLOT(memory). (Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF

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8311010n	**Message:** SLOT#n-FRU data error **Explanation:** An FRU data error in SLOT#n was detected. **Replacement part/number:** 21: SLOT/ 00-15 **Action:** Replace the SLOT(memory). (Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
83120000	**Message:** PCI-BD-FRU access error **Explanation:** An FRU access error on the PCI-BD was detected. **Replacement part/number:** 03: PCI-BD/ 00 (model 450-Q only) **Action:** Replace the PCI board (model 450-Q only). (Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
83120100	**Message:** PCI-BD-FRU data error **Explanation:** An FRU data error on the PCI-BD was detected. **Replacement part/number:** 03: PCI-BD/ 00 (model 450-Q only) **Action:** Replace the PCI board (model 450-Q only). (Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8313000n	**Message:** PSU#n-FRU access error **Explanation:** An FRU access error on PSU#n was detected. **Replacement part/number:** 41: PSU/ 0-2 **Action:** Replace the PSU. (Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8313010n	**Message:** PSU#n-FRU data error **Explanation:** An FRU data error on PSU#n was detected. **Replacement part/number:** 41: PSU/ 0-2 **Action:** Replace the PSU. (Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8314000n	**Message:** SCSI-BP#n-FRU access error **Explanation:** An FRU access error on SCSI-BP#n was detected. **Replacement part/number:** 04: SCSI-BP/ 0-1 **Action:** Replace the SCSI-BP. (Or for models 250-R4/250-P/450-R/450-Q: Replace the IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8314010n	**Message:** SCSI-BP#n-FRU data error **Explanation:** An FRU data error on SCSI-BP#n was detected. **Replacement part/number:** 04: SCSI-BP/ 0-1 **Action:** Replace the SCSI-BP. (Or for models 250-R4/250-P/450-R/450-Q: Replace the IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF

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84yyyy01 (*x)	**Message:** FAN#xx alarm (XXXXXXXX,CODE=XXXXXXXX) **Explanation:** A decrease in fan speed was detected. **Replacement part/number:** A1:-/FF **Action:** Replace the fan of the specified IO device. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
84yyyy02 (*x)	**Message:** Power Unit alarm (XXXXXXXX,CODE=XXXXXXXX) **Explanation:** A power supply error was detected. **Replacement part/number:** A1:-/FF **Action:** Replace the power supply unit of the specified IO device. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
84yyyy03 (*x)	**Message:** Memory backup battery warning (XXXXXXXX,XX) **Explanation:** A memory battery error was detected. **Replacement part/number:** A1:-/FF **Action:** Replace the battery of the specified IO device. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
84yyyy04 (*x)	**Message:** Extend power warning (XXXXXXXX,CODE=XXXXXXXX) **Explanation:** An extended power interface error was detected. **Replacement part/number:** A1:-/FF **Action:** Check the power interface connected to the specified IO device. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
84yyyy05 (*x)	**Message:** UPS alarm (XXXXXXXX,CODE=XXXXXXXXX) **Explanation:** A UPS error was detected. **Replacement part/number:** A1:-/FF **Action:** Check the UPS unit connected to the specified IO device. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
84yyyy06 (*x)	**Message:** Thermal alarm (XXXXXXXX,CODE=XXXXXXXX) **Explanation:** A temperature error was detected. **Replacement part/number:** A1:-/FF **Action:** Improve the environment. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
84yyyy07 (*x)	**Message:** AC alarm (XXXXXXXX,CODE=XXXXXXXXX) **Explanation:** Abnormality is detected about the power supplied to the system. **Replacement part/number:** A1:-/FF **Action:** Check the voltage of power supplied to the system. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
84yyyy08 (*x)	**Message:** Diag alarm (XXXXXXXX,CODE=XXXXXXXX) **Explanation:** A device-specific error was detected. **Replacement part/number:** A1:-/FF **Action:** Replace the specified IO device. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
84yyyy09 (*x)	**Message:** Mount alarm (XXXXXXXX,CODE=XXXXXXXX) **Explanation:** A mount error was detected. **Replacement part/number:** A1:-/FF **Action:** Check the installation status of the specified IO device. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF

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84yyyyF1 (*x)	**Message:** RCI disconnected. RCI is invalidated. Code=XX **Explanation:** A communication error between RCI control circuits was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Alarm/:3/:XSCF
84yyyyF2 (*x)	**Message:** RCI Status check timeout(XXXXXXXX code=YY) **Explanation:** An RCI network communication timeout error was detected. **Replacement part/number:** A1:-/FF **Action:** Check the RCI cable connection, power supply of the connected device, and the connection for RCI termination. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
84yyyyF3 (*x)	**Message:** RCI neuron interface error code = XXXX **Explanation:** A RCI control circuits token error was detected. **Replacement part/number:** A1:-/FF **Action:** Check the RCI cable connection, power supply of the connected device, and the connection for RCI termination. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
84yyyyF4 (*x)	**Message:** Unknown RCI device was detected(XXXXXXXX) **Explanation:** An unregistered RCI device was detected. **Replacement part/number:** A1:-/FF **Action:** After checking the unregistered device, reconstruct the RCI if installation of the device is required. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
870005FF	**Message:** SCF-LAN IP duplicate **Explanation:** An IP address duplication error was detected. **Replacement part/number:** FF:-/FF **Action:** Check the LAN environment. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8D000500	**Message:** SCF-FMEM bank change error **Explanation:** Bank switching was disabled. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8E07200n	**Message:** Correct. error count over flow **Explanation:** Count of ECC correctable errors detected by the CPU#n exceeds the threshold. **Replacement part/number:** FF: -/ FF **Action:** Please check the errors occurred before. Then perform it as follow. Replace the SLOT(memory). (Or Replace the PCI-Card, or replace the SB, or replace the CPU.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8E07300n	**Message:** CPU#n JTAG-IDCODE xx differ from FRU-IDCODE yy **Explanation:** A CPU ID CODE error was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8E208500	**Message:** Error symptom(CPU#n,04) **Explanation:** Logging errors when a CPU error symptom occurs. **Replacement part/number:** FF:-/FF **Action:** Please check the errors occurred before or after. Then perform it as follow. Replace the SB or CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF

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8E208600	**Message:** Error symptom(CPU#n,02) **Explanation:** Logging errors when a CPU error symptom occurs. **Replacement part/number:** FF:-/FF **Action:** Please check the errors occurred before or after. Then perform it as follow. Replace the SB or CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8E208700	**Message:** RC data error(yy) **Explanation:** Analysis was not possible because a log request was issued in the RC data error state. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. However, if the error occurred after a failure to upgrade the firmware, retry the upgrade. If the upgrade still fails, replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8E208800	**Message:** Hardware too many errors **Explanation:** Analysis is not possible because there are too many error factors. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8E208900	**Message:** Hardware no error region(xxxxxxxx) **Explanation:** Analysis is not possible because there are no error factors. **Replacement part/number:** FF: -/FF **Action:** Replace the SB or CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8E20F30n	**Message:** Uncorrec. error(Internal)(xxxxxxxx) **Explanation:** A hardware error detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8E20F40n	**Message:** Uncorrec. error(Outside)(xxxxxxxx) **Explanation:** A hardware error detected. **Replacement part/number:** 01:SB/00 or 11: CPU/ 0-3 **Action:** Replace the SB or SLOT(memory) or CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8E20F700	**Message:** Uncorrec. error(Marked)(xxxxxxxx) **Explanation:** A hardware error detected. **Replacement part/number:** 01:SB/00 **Action:** Do the action of the error generated before.. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8E20F800	**Message:** Instruction retry(xxxxxxxx) **Explanation:** The instruction retry was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8E20FA00	**Message:** Watchdog timeout(xxxxxxxx) **Explanation:** A watchdog timeout was detected. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. (Or Replace the CPU. Or Replace the PCI-Card.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
8E20FB0n	**Message:** Bus protocol error(xxxxxxxx) **Explanation:** A fatal error occurred. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU or SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF

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9080000n	**Message:** Parts Status Reset Failure **Explanation:** In Machine Administration Menu, the status of abnormal parts was reset. **Replacement part/number:** (*M) **Action:** Replace the replacement part. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:0/:XSCF
C0800E00	**Message:** SCF-CPU WATCHDOG reset **Explanation:** A watchdog reset was detected. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3 /:XSCF
C1002100	**Message:** SCFC access error (addr=xxxxxxxx) **Explanation:** An SCFC access error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C20107FF (Warning)	**Message:** PSU type is not proper #0-DC,#1-DC,#2-AC **Explanation:** The type of PSU is not appropriate. **Replacement part/number:** FF:-/FF **Action:** Check the PSU configuration. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C2040200	**Message:** UPS alarm **Explanation:** A battery error (BPS) was detected. **Replacement part/number:** 81: UPS/ 00 **Action:** Replace the UPS. (Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C3010000	**Message:** THERMAL-SENSOR（Panel) access error **Explanation:** The system control bus detected an access error. **Replacement part/number:** 02: PANEL/ 00 **Action:** Replace the panel. (For models 250-R4/250-P/450-R/450-Q: Replace the IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C3020000	**Message:** PANEL-EEPROM access error **Explanation:** The system control bus detected an access error. **Replacement part/number:** 02: PANEL/ 00 **Action:** Replace the panel. (For models 250-R4/250-P/450-R/450-Q: Replace the IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C3030000	**Message:** PANEL-SWITCH-CONTROLLER access error **Explanation:** The system control bus detected an access error. **Replacement part/number:** 02:PANEL/00 **Action:** Replace the panel. (For models 250-R4/250-P/450-R/450-Q: Replace the IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C3040000	**Message:** LED-CONTROLLER#0 access error **Explanation:** The system control bus detected an access error. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF

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C3050000	**Message:** LED-CONTROLLER#1 access error **Explanation:** The system control bus detected an access error. **Replacement part/number:** 02:PANEL/00 **Action:** Replace the panel. (For models 250-R4/250-P/450-R/450-Q: Replace the IO-back panel. Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C307000n	**Message:** CPUDDC-VID#n access error **Explanation:** The system control bus detected an access error. **Replacement part/number:** 11:CPU/0-3 **Action:** Replace the CPU. (Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C3080000	**Message:** SB-FRU access error **Explanation:** The system control bus detected an access error. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C309000n	**Message:** DDC-VID#n access error **Explanation:** The system control bus detected an access error. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C30A000n	**Message:** DUAL FMEM CONTROLLER#n access error **Explanation:** The system control bus detected an access error. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C30E010n (Warning)	**Message:** FAN-CONTROLLER#n access error **Explanation:** Lost of fan redundancy, caused by access error to system control bus, is detected. And, fans are changed to mode of higher rotation speed. **Replacement part/number:** 01:SB/00 (model 250-R), 32:FANJT/0-1 (FAN#0-3 of model 250-R4/250-P/450-R/450-Q) 03:PCI-BD/00 (FAN#4-7 of model 450-R/450-Q) **Action:** For model 250-R: Replace the SB. For models 250-R4/250-P/450-R/450-Q: Replace the SB if fan from #0 to #3 is specified. For model 450-Q: Replace the PCI board if fan from #4 to #7 is specified. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C30E020n	**Message:** FAN#n alarm (xxxrpm) **Explanation:** An abnormal fan speed (fan-configuration remains redundant) was detected. **Replacement part/number:** 31: FAN/ 0-7 **Action:** Replace the fan. (Or Do the action of the above "FAN-CONTROLLER#n".) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C30E040n	**Message:** FAN#n not mounted **Explanation:** A fan was not installed (fan-configuration remains redundant). **Replacement part/number:** 31:FAN/0-7 **Action:** Install the missing FAN. (Or Do the action of the above "FAN-CONTROLLER#n".) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF

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C30F0000	**Message:** PCI-MOUNT-SENSOR#0 access error **Explanation:** The system control bus detected an access error. **Replacement part/number:** 01: SB/ 00 (models 250-R4/250-P/450-R/450-Q), 05: PCI-RISER (model 250-R) **Action:** For models 250-R4/250-P/450-R/450-Q: Replace the SB. For model 250-R, Repalce the PCI-RISER. (Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C310000n	**Message:** CPU#n-FRU access error **Explanation:** An FRU access error on CPU#n was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Replace the CPU. (Or Replace the SB.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C4yyyy1n (*x)	**Message:** FAN#xx alarm (XXXXXXXX,CODE=XXXXXXXX) **Explanation:** A fan error was detected. **Replacement part/number:** A1:-/FF **Action:** Replace the fan of the specified IO device. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C4yyyy2n (*x)	**Message:** Power Unit alarm (XXXXXXXX,CODE=XXXXXXXX) **Explanation:** A power supply error was detected. **Replacement part/number:** A1:-/FF **Action:** Replace the power supply unit of the specified IO device. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C4yyyy3n (*x)	**Message:** Memory backup battery alarm (XXXXXXXX,XX) **Explanation:** A memory battery error was detected. **Replacement part/number:** A1:-/FF **Action:** Replace the battery of the specified IO device. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C4yyyy4n (*x)	**Message:** Extend power alarm (XXXXXXXX,CODE=XXXXXXXX) **Explanation:** An extended power interface error report was detected. **Replacement part/number:** A1:-/FF **Action:** Check the power interface connected to the specified IO device. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C4yyyy5n (*x)	**Message:** UPS alarm (XXXXXXXX,CODE=XXXXXXXXX) **Explanation:** A UPS error was detected. **Replacement part/number:** A1:-/FF **Action:** Check the UPS unit connected to the specified IO device. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C4yyyy6n (*x)	**Message:** Thermal alarm (XXXXXXXX,CODE=XXXXXXXX) **Explanation:** An abnormal temperature was detected. **Replacement part/number:** A1:-/FF **Action:** Improve the environment. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF

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C4yyyy7n (*x)	**Message:** AC alarm (XXXXXXXX,CODE=XXXXXXXXX) **Explanation:** Abnormality of power is detected. **Replacement part/number:** A1:-/FF **Action:** Check the voltage of power supplied to the system. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C4yyyy8n (*x)	**Message:** Diag alarm (XXXXXXXX,CODE=XXXXXXXX) **Explanation:** A device specific error was detected. **Replacement part/number:** A1:-/FF **Action:** Replace the specified IO device. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C4yyyy9n (*x)	**Message:** Mount alarm (XXXXXXXX,CODE=XXXXXXXX) **Explanation:** A mount error was detected. **Replacement part/number:** A1:-/FF **Action:** Check the installation status of the specified IO device. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C7000100	**Message:** SCF-LAN memory access error **Explanation:** A memory access error was detected. **Replacement part/number:** 01:SB/00 **Action:** Check the LAN environment. Then replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C7000200	**Message:** SCF-LAN loop-back connection error **Explanation:** A data compare error was detected. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C7000300	**Message:** SCF-LAN MAC duplicate **Explanation:** A MAC address duplication error was detected. **Replacement part/number:** 01:SB/00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
C7000400	**Message:** SCF-LAN framing error **Explanation:** A framing error was detected. **Replacement part/number:** 01:SB/00 **Action:** Check the LAN environment. replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
CD000100	**Message:** SCF-FMEM write protect error **Explanation:** A write-protection error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
CD000200	**Message:** SCF-FMEM update error(erase) **Explanation:** An erase failure was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
CD000300	**Message:** SCF-FMEM update error(write) **Explanation:** A write failure was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF

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CD000400	**Message:** SCF-FMEM update error(checksum) **Explanation:** A checksum error after a write was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3/:XSCF
D080000n	**Message:** Parts Status Reset Failure **Explanation:** In Machine Administration Menu, the status of abnormal parts was reset. **Replacement part/number:** (*M) **Action:** Replace the replacement part. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:0/:XSCF
DF000100	**Message:** SCF system-down (XXXXXXXX) **Explanation:** A XSCF system error occurred. **Replacement part/number:** FF: --/ FF **Action:** Needs a dump of XSCF. And replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3 /:XSCF
DF001000	**Message:** SCF-CPU illegal interrupt **Explanation:** A XSCF CPU illegal interrupt occurred. **Replacement part/number:** FF: --/ FF **Action:** Needs a dump of XSCF. And replace the SB. Contact the system administrator or a FE. **Error level/report level/error detection source:** Warning/:3 /:XSCF

(*x): yyyy: device address.

(*M): About part number, refer to Table B-1-P for details.

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Table B-1-6 Warning-level errors[2]

Error code	Message and explanation
0510000n	**Message:** CPU status error(CPU#n) **Explanation:** CPU#n was not able to be recognized. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
0511000n	**Message:** CPU status error(CPU#n) **Explanation:** An error was detected in mounting information on CPU#n. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
07000031	**Message:** FATAL check1 error(SC) **Explanation:** A parity error was detected in SC. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
0701000n	**Message:** FATAL check1 error(CPU#n) **Explanation:** A coherence error occurred. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST

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07020030	**Message:** FATAL check1 error(DTAG) **Explanation:** A DTAG uncorrectable error occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
07030031	**Message:** FATAL check1 error(SC) **Explanation:** A UPA address parity error occurred.(SC->U2P) **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
070400XX	**Message:** FATAL check1 error(U2P#n) **Explanation:** Master Class0 overflowed. [(n,XX)=(0,08),(1,09),(2,0a),(3,0b)] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
070500XX	**Message:** FATAL check1 error(U2P#n) **Explanation:** A UPA address parity error occurred.(U2P->SC) [(n,XX)=(0,08),(1,09),(2,0a),(3,0b)] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
07060030	**Message:** FATAL check1 error(DTAG) **Explanation:** A DTAG parity error occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
0710000n	**Message:** FATAL check2 error(CPU#n) **Explanation:** A FATAL detected by CPU occurred. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
0711000n	**Message:** FATAL check2 error(CPU#n) **Explanation:** A UPA address parity error occurred.(CPU->SC) **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
0712000n	**Message:** FATAL check2 error(CPU#n) **Explanation:** Master Class0 overflowed. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
0713000n	**Message:** FATAL check2 error(CPU#n) **Explanation:** Master Class1 overflowed. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
07140031	**Message:** FATAL check2 error(SC) **Explanation:** A UPA address parity error occurred.(SC->CPU) **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
080000XX	**Message:** Timer1 increment error(U2P(Timer)#n) **Explanation:** A U2P timer error was detected. [(n,XX)=(0,08),(1,09),(2,0a),(3,0b)] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST

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0801000X	**Message:** Timer1 increment error(U2P(Timer)#X) **Explanation:** There is no U2P timer which can be used. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
0900000n	**Message:** Tick/Stick error(CPU#n) **Explanation:** A Tick error was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
0910000n	**Message:** Tick/Stick error(CPU#n) **Explanation:** A Stick error was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
0A00000X	**Message:** MMU Registers error(CPU#X) **Explanation:** A compare error was detected in MMU Registers. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
0A1z000X [z=0,1..3]	**Message:** MMU TLBs error(CPU#X) **Explanation:** A compare error was detected in MMU TLBs. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
0C00000X	**Message:** CPU type check error(CPU#X) **Explanation:** A cache size error was detected in CPUs. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
1120006n	**Message:** Probing memory error(SLOT#n) **Explanation:** A SPD checksum error was detected. **Replacement part/number:** 21: SLOT/ 00-15 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
1121006n	**Message:** Probing memory error(SLOT#n) **Explanation:** A SPD data error was detected. **Replacement part/number:** 21: SLOT/ 00-15 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
112300F0	**Message:** Probing memory error(No avail memory) **Explanation:** There is no memory which can be used. **Replacement part/number:** FF: -/ FF **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
120z00XX [z=0,1,2]	**Message:** Memory Address Line error(SLOT#yy,yy) **Explanation:** A memory error occurred. [(yy,yy , XX)=(00,01 , 80),(02,03 , 81)..(14,15 , 87)] **Replacement part/number:** 22: SLOT/ 00-15 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
140z000n [z=0,1..4]	**Message:** Softint register error(CPU#n) **Explanation:** A CPU softint register error was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST

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141z000n [z=0,1..3]	**Message:** Tick register error(CPU#n) **Explanation:** A CPU Tick register error was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
142z000n [z=0,1..3]	**Message:** Stick register error(CPU#n) **Explanation:** A CPU STick register error was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
150z000n [z=0,1,2]	**Message:** U2P Probe error(U2P#n) **Explanation:** A U2P error was detected. [n=0-3] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
151000XX	**Message:** U2P Registers error(U2P#n) **Explanation:** A U2P register error was detected. [(n,XX)=(0,08),(1,09),(2,0a),(3,0b)] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
151100XX	**Message:** U2P Registers error(U2P#n) **Explanation:** A U2P register error was detected. [(n,XX)=(0,08),(1,09),(2,0a),(3,0b)] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
152z00XX [z=0,1..3]	**Message:** U2P Interrupt error(yyyyy) **Explanation:** Expected interrupt is not detected. The definition of yyyy and code XX are as follows: — U2P#0-3[XX=08-0B] — U2P(Timer)#0-3[XX=10-13] — PCI#0-8[XX=20-28] — TTY-A[XX=33]、TTY-B[XX=34] — HPC#0-2[XX=35-37] — SCSI#0-1[XX=40-41] — LAN#0-1[XX=42-43] — ATAPI#0[XX=44] — USBC[XX=45] **Replacement part/number:** 01: SB/ 00 or IO **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
153A000X [X=8,9..b]	**Message:** U2P Timer/Counter error(U2P(Timer)#X) **Explanation:** A U2P timer error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
153z00XX [z=0,1..9]	**Message:** U2P Timer/Counter error(U2P(Timer)#n) **Explanation:** A U2P timer error was detected. [(n,XX)=(0,08),(1,09),(2,0a),(3,0b)] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
154z00XX [z=0,1..3]	**Message:** U2P Functional error(U2P#n) **Explanation:** A U2P functional error was detected. [(n,XX)=(0,08),(1,09),(2,0a),(3,0b)] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST

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1560002n	**Message:** U2P PCI Slot error(PCI#0n) **Explanation:** Abnormal reponse is received from a PCI slot. **Replacement part/number:** 92: PCI/ 00-08 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
16000039	**Message:** TOD test error(TOD) **Explanation:** Calendar clock is not operational. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
16100033	**Message:** TTY test error(TTY-A) **Explanation:** A TTY register error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
162000XX	**Message:** HPC3130 error(HPC#n) **Explanation:** A HotPlug functional error was detected. [(XX,n)=(35,0),(36,1),(37,2)] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
170v0042 [v=0,1,2]	**Message:** Ethernet register error(LAN#0) **Explanation:** A LAN register error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
171v0042 [v=0,1..7]	**Message:** Ethernet inernal loopback error(LAN#0) **Explanation:** A LAN loopback error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
172v0042 [v=0,1..7]	**Message:** Ethernet Physical Layer loopback(10Mbps) error(LAN#0) **Explanation:** A LAN loopback error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
173v0042 [v=0,1..7]	**Message:** Ethernet PHY loopback(100Mbps) error(LAN#0) **Explanation:** A LAN loopback error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
1740004n	**Message:** Ultra320 Registers error(SCSI#n) **Explanation:** A SCSI register error was detected. [n=0,1] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
17500043	**Message:** GIGA-Ether Registers error(LAN#1) **Explanation:** A LAN register error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
17600044	**Message:** IDE Registers error(IDE) **Explanation:** A IDE register error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST

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17700045	**Message:** USB error(USBC) **Explanation:** A USB error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
17710045	**Message:** USB error(USBC) **Explanation:** A USB error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
8xx008yy **9xx008yy** (*p)	**Message:** instruction_access_exception(CPU#n) **Explanation:** An instruction access exception was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
8xx00Ayy **9xx00Ayy** (*p)	**Message:** instruction_access_error(zzz) **Explanation:** An instruction access error was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
8xx030yy **9xx030yy** (*p)	**Message:** data_access_exception(CPU#n) **Explanation:** A data access exception was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
8xx032yy **9xx032yy** (*p)	**Message:** data_access_error(zzz) **Explanation:** A UE of cache or memory was detected. **Replacement part/number:** 11: CPU/ 0-3 or 21: SLOT/ 00-15 or 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
8xx034yy **9xx034yy** (*p)	**Message:** mem_address_not_aligned(CPU#n) **Explanation:** A data alignment error was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
8xx04Wyy **9xx04Wyy** (*p)	**Message:** interrupt_level_W(CPU#n) **Explanation:** An illegal interruption was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
8xx060yy **9xx060yy** (*p)	**Message:** interrupt_vector(zzz) **Explanation:** An illegal interruption was detected. **Replacement part/number:** 11: CPU/ 0-3 or 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
8xx063yy **9xx063yy** (*p)	**Message:** ECC_error(zzz) **Explanation:** A UE of cache and memory was detected. **Replacement part/number:** 11: CPU/ 0-3 or 21: SLOT/ 00-15 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
8xx064yy **9xx064yy** (*p)	**Message:** fast_instruction_access_mmu_miss(CPU#n) **Explanation:** An instruction access mmu miss was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST

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8xx068yy **9xx068yy** (*p)	**Message:** fast_data_access_mmu_miss(CPU#n) **Explanation:** A data access mmu miss was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
8xx06Cyy **9xx06Cyy** (*p)	**Message:** fast_data_access_protection(CPU#n) **Explanation:** A data protection exception was detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
8xxTTTyy **9xxTTTyy** (*p)	**Message:** (Trap name(CPU#n)) **Explanation:** Any other trap, which is not described above, is detected. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
921032XX	**Message:** data_access_error(SLOT#yy,yy) **Explanation:** A memory error occurred. [(yy,yy , XX)=(00,01 , 80),(02,03 , 81)..(14,15 , 87)] **Replacement part/number:** 22: SLOT/ 00-15 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
921063XX	**Message:** ECC_error(SLOT#yy,yy) **Explanation:** A memory error occurred. [(yy,yy , XX)=(00,01 , 80),(02,03 , 81)..(14,15 , 87)] **Replacement part/number:** 22: SLOT/ 00-15 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST
xxxC000n (*p)	**Message:** CPU Degrade error(CPU#n) **Explanation:** Part of internal sections in CPU is degraded. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:3/:POST

(*p) xx:Test phase number, XX,yy:Component number, zzz:Component name, ppp:Phase abbreviation. Please refer to Table B-1-T and Table B-1-C for details.

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Table B-1-7 Warning-level errors[3]

Error code	Message and explanation
A000000n	**Message:** CPU was degraded(CPU#n) **Explanation:** A CPU of the dergadation by OS occurred. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:0/:OBP
A010006n	**Message:** DIMM was degraded(SLOT#n) **Explanation:** A DIMM slot of the dergadation by OS occurred. **Replacement part/number:** 21: SLOT/ 00-15 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:0/:OBP
A02000XX	**Message:** U2P was degraded(U2P#n) **Explanation:** A U2P of the dergadation by OS occurred. [(n,XX)=(0,08),(1,09),(2,0a),(3,0b)] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:0/:OBP

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A030001n	**Message:** U2P(Timer)#n was degraded **Explanation:** A U2P(timer) of the dergadation by OS occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:0/:OBP
A040002n	**Message:** PCI was degraded(PCI#0n) **Explanation:** A PCI of the dergadation by OS occurred. **Replacement part/number:** 92: PCI/ 00-08 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:0/:OBP
A050004n	**Message:** SCSI was degraded(SCSI#n) **Explanation:** A SCSI of the dergadation by OS occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:0/:OBP
A0600044	**Message:** ATAPI was degraded **Explanation:** An ATAPI of the dergadation by OS occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:0/:OBP
A07000XX [XX=42,43]	**Message:** LAN#n was degraded **Explanation:** An LAN of the dergadation by OS occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:0/:OBP
A0900033	**Message:** ttya was degraded **Explanation:** A tty-a of the dergadation by OS occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:0/:OBP
A0A00034	**Message:** ttyb was degraded **Explanation:** A tty-b of the dergadation by OS occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:0/:OBP
B0000039	**Message:** TOD was degraded **Explanation:** A TOD of the dergadation by OS occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:0/:OBP
B0200032	**Message:** SCFI was degraded **Explanation:** A SCFI of the dergadation by OS occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:0/:OBP
B030003d	**Message:** SCFI(panel) was degraded **Explanation:** A SCFI(panel) of the dergadation by OS occurred. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:0/:OBP
B04000XX	**Message:** HPC was degraded(HPC#n) **Explanation:** A HPC of the dergadation by OS occurred. [(n,XX)=(0,35),(1,36),(2,37),(3,38)] **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Warning/:0/:OBP

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Table B-1-8 Warning-level errors[4]

Error code	Message and explanation
A0000100	**Message:** Check machine administration logs **Explanation:** The failure of parts is detected. **Replacement part/number:** (*M) **Action:** Check the hardware logs of Machine Administration function. Contact a FE. **Error level/report level/error detection source:** Warning/:0/:Machine Administration
E0000100	**Message:** Check machine administration logs **Explanation:** The failure of parts is detected. **Replacement part/number:** (*M) **Action:** Check the hardware logs of Machine Administration function. Contact a FE. **Error level/report level/error detection source:** Warning/:0/:Machine Administration

(*M): About part number, refer to Table B-1-P for details.

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Information

The content of the error messages might be changed because of the function improvement.

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Notice

The following table lists notice-level errors (e.g., errors in which system operation can continue) and the actions to be taken.

To view errors by error code, use "XSCF Error Code Table" in Section B.4.

Alarm[1] Alarm[2] Alarm[3] Warnig[1] Warnig[2] Warnig[3] Warnig[4] Notice[1] Notice[2] Notice[3] Notice[4]

Table B-1-9 Notice-level errors[1]

Error code	Message and explanation
408055FF	**Message:** SCF-FMEM version changed **Explanation:** SCF-FMEM was upgraded to a new version. **Replacement part/number:** FF:-/FF **Action:** Check the version. **Error level/report level/error detection source:** Notice/:3/:XSCF
41100000	**Message:** TTY trace saved CAUSE: PANIC **Explanation:** A tty trace was executed because a panic occurred. **Replacement part/number:** FF:-/FF **Action:** None. **Error level/report level/error detection source:** Notice/:0/:XSCF
41100100	**Message:** POST/OBP trace requested **Explanation:** POST/OBP requested a trace. **Replacement part/number:** FF:-/FF **Action:** None. **Error level/report level/error detection source:** Notice/:0/:XSCF
41110000	**Message:** This is a TEST log **Explanation:** A test(Notice level) is executed in Machine Administration function. **Replacement part/number:** FE:test/FF **Action:** None. **Error level/report level/error detection source:** Notice/:3/:XSCF
4201010n	**Message:** PSU#n ACFAIL (When the input power source is the AC Type.) PSU#n input failure (When the input power source is the DC Type.) **Explanation:** Voltage reduction of input power source was detected. **Replacement part/number:** 41:PSU/0-2 **Action:** Check the installation environment. (Or for models 250-R: Replace the PSU-CAGE. For models 250-R4/250-P/450-R/450-Q: Replace the Power board and IO-back panel. Or Replace the SB.) Or Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
4201030n	**Message:** PSU#n PWOK error **Explanation:** An output voltage error was detected. **Replacement part/number:** FF:-/FF **Action:** Check the PSU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:3/:XSCF
4201810n	**Message:** PSU#n ACFAIL recovered (When the input power source is the AC Type.) PSU#n input failure recovered (When the input power source is the DC Type.) **Explanation:** Power was restored. **Replacement part/number:** 41: PSU/ 0-2 **Action:** Check the installation environment. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:3 or 0/:XSCF

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4201840n	**Message:** PSU#n mounted **Explanation:** The PSU unit has been installed. **Replacement part/number:** 41: PSU/ 0-2 **Action:** Check the PSU. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:3/:XSCF
42040100	**Message:** AC Power Down (When the input power source is the AC Type.) Power Down (When the input power source is the DC Type.) **Explanation:** A power outage occurred. **Replacement part/number:** FF:-/FF **Action:** Check the installation environment. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:3 or 0/:XSCF
42040300	**Message:** UPS low battery **Explanation:** Low battery voltage was detected. **Replacement part/number:** FF:-/FF **Action:** Charge the UPS. (Or Replace the battery.) Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:3/:XSCF
42048100	**Message:** AC Power Recovered (When the input power source is the AC Type.) Power Recovered (When the input power source is the DC Type.) **Explanation:** Power was restored. **Replacement part/number:** FF:-/FF **Action:** Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:3 or 0/:XSCF
430102FF	**Message:** FAN speed low CAUSE: temperature lower **Explanation:** Because the inlet temperature has decreased and returned to the normal range, fan speed has decreased. **Replacement part/number:** FF:-/FF **Action:** None. **Error level/report level/error detection source:** Notice/:0/:XSCF
430103FF	**Message:** FAN speed high CAUSE: temperature higher **Explanation:** Because the inlet temperature was above the normal range, fan speed increased. **Replacement part/number:** FF:-/FF **Action:** Check the environment. **Error level/report level/error detection source:** Notice/:0/:XSCF
430E060n	**Message:** FAN#n mounted **Explanation:** A FAN has been mounted. **Replacement part/number:** 31: FAN/ 0-7 **Action:** None. **Error level/report level/error detection source:** Notice/:0/:XSCF
431501FF	**Message:** OBP-FMEM version changed **Explanation:** OBP-FMEM was upgraded to a new version. **Replacement part/number:** FF:-/FF **Action:** Check the version. **Error level/report level/error detection source:** Notice/:3/:XSCF
431601FF	**Message:** SB changed **Explanation:** An SB has been replaced. **Replacement part/number:** FF:-/FF **Action:** None. **Error level/report level/error detection source:** Notice/:3/:XSCF
431602FF	**Message:** PANEL changed **Explanation:** A panel has been replaced. **Replacement part/number:** FF:-/FF **Action:** None. **Error level/report level/error detection source:** Notice/:3/:XSCF

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431605FF	**Message:** SB or PANEL changed **Explanation:** A SB or a panel has been replaced. **Replacement part/number:** FF:-/FF **Action:** Contact a FE. **Error level/report level/error detection source:** Notice/:3/:XSCF
431606FF	**Message:** Restore error from SCF-FMEM to PANEL-EEPROM **Explanation:** The restoration from FMEM to PANEL failed. **Replacement part/number:** FF:-/FF **Action:** Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:3/:XSCF
431607FF	**Message:** Backup error from PANEL-EEPROM to SCF-FMEM **Explanation:** The backup from PANEL to FMEM failed. **Replacement part/number:** FF:-/FF **Action:** Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:3/:XSCF
44yyyyA0 (*x)	**Message:** Status changed (XXXXXXXX,CODE=XXXXXXXX) **Explanation:** An RCI IO device is recovered or re-mounted. **Replacement part/number:** A1:-/FF **Action:** None. **Error level/report level/error detection source:** Notice/:0/:XSCF
44yyyyE0 (*x)	**Message:** Emergency Power-off (XXXXXXXX) **Explanation:** An RCI IO device was forcibly powered off. **Replacement part/number:** A1:-/FF **Action:** Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:3/:XSCF
46110000	**Message:** This is a TEST log **Explanation:** A test(Notice level) is executed in XSCF shell function. **Replacement part/number:** FE:test/FF **Action:** None. **Error level/report level/error detection source:** Notice/:3/:XSCF
4D000700	**Message:** FMEM data error,PANEL-EEPROM cannot be restored **Explanation:** PANEL cannot be restored because FMEM data error. **Replacement part/number:** 01: SB/ 00 **Action:** Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:3/:XSCF
4D0008FF	**Message:** Option data changed **Explanation:** A SSH host key was changed. **Replacement part/number:** FF:-/FF **Action:** Check the changing of the SSH host key. **Error level/report level/error detection source:** Notice/:0/:XSCF
4E07200n	**Message:** Correct. error count over flow **Explanation:** Count of ECC correctable errors detected by the CPU#n exceeds the threshold. **Replacement part/number:** FF: -/ FF **Action:** None. **Error level/report level/error detection source:** Notice/:0/:XSCF
4E200800	**Message:** DTAG correctable error(xxxxxxxx) **Explanation:** A DTAG error was corrected by the hardware. **Replacement part/number:** 01:SB/00 **Action:** None. **Error level/report level/error detection source:** Notice/:0/:XSCF

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4E20F00n	**Message:** Processor detected error(xxxxxxxx) **Explanation:** A CPU detected error. **Replacement part/number:** 11: CPU/ 0-3 **Action:** Please follow the message of OS or POST/OBP. **Error level/report level/error detection source:** Notice/: 0/:XSCF
4E20F50n	**Message:** Correct. error(Internal)(xxxxxxxx) **Explanation:** An error happened inside of CPU was corrected by the hardware. **Replacement part/number:** 11:CPU/0-3 **Action:** Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/: 0/:XSCF
4E20F600	**Message:** Correct. error(Outside)(xxxxxxxx) **Explanation:** An error external to the CPU was corrected by the hardware. **Replacement part/number:** 01:SB/00 **Action:** Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/: 0/:XSCF
500001FF	**Message:** SNMP Agent already started **Explanation:** The SNMP agent function has already started. **Replacement part/number:** FF:-/FF **Action:** None. **Error level/report level/error detection source:** Notice/:0/:XSCF
500002FF	**Message:** SNMP Agent already stopped **Explanation:** The SNMP agent function has already stopped. **Replacement part/number:** FF:-/FF **Action:** None. **Error level/report level/error detection source:** Notice/:0/:XSCF
500003FF	**Message:** SNMP Agent couldn't start by bad configuration **Explanation:** Inadequate settings were detected when the SNMP agent function started. **Replacement part/number:** FF:-/FF **Action:** Recheck the settings. **Error level/report level/error detection source:** Notice/:0/:XSCF
500004FF	**Message:** SNMP Agent failed to send trap **Explanation:** The SNMP agent function failed to issue a trap. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
500110FF to 500170FF	**Message:** SNMP Agent stopped by firmware **Explanation:** The SNMP agent function stopped for a reason related to firmware. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
501001FF	**Message:** Illegal XSCF host name specified **Explanation:** An illegal host name of XSCF was specified. **Replacement part/number:** FF:-/FF **Action:** Recheck the specified host name of XSCF. **Error level/report level/error detection source:** Notice/:0/:XSCF
501002FF	**Message:** Communication to SMTP server timeout **Explanation:** A timeout occurred during communication with the SMTP server. **Replacement part/number:** FF:-/FF **Action:** Recheck the server setting. **Error level/report level/error detection source:** Notice/:0/:XSCF

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501003FF	**Message:** Communication failure to SMTP server occurred **Explanation:** A communication error with the SMTP server occurred. **Replacement part/number:** FF:-/FF **Action:** Recheck the server setting. **Error level/report level/error detection source:** Notice/:0/:XSCF
501004FF	**Message:** Mail report function is not enabled **Explanation:** The mail report function has not been enabled. **Replacement part/number:** FF:-/FF **Action:** Recheck the mail report function settings. **Error level/report level/error detection source:** Notice/:0/:XSCF
501010FF	**Message:** Mail access mode is not enabled **Explanation:** Mail access mode has not been enabled. **Replacement part/number:** FF:-/FF **Action:** Recheck the mail access mode settings. **Error level/report level/error detection source:** Notice/:0/:XSCF
501011FF	**Message:** Illegal SMTP server address specified **Explanation:** An illegal SMTP server address was specified. **Replacement part/number:** FF:-/FF **Action:** Recheck the mail access mode settings. **Error level/report level/error detection source:** Notice/:0/:XSCF
501012FF	**Message:** No SMTP server specified **Explanation:** A SMTP server has not been specified. **Replacement part/number:** FF:-/FF **Action:** Specify a SMTP server. **Error level/report level/error detection source:** Notice/:0/:XSCF
501013FF	**Message:** Illegal SMTP server or mail address specified **Explanation:** An illegal SMTP server or mail address was specified. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server or mail address. **Error level/report level/error detection source:** Notice/:0/:XSCF
501020FF	**Message:** Mail access mode already disable **Explanation:** Mail access mode has been disabled. **Replacement part/number:** FF:-/FF **Action:** None. **Error level/report level/error detection source:** Notice/:0/:XSCF
501030FF	**Message:** Illegal name server address specified **Explanation:** An illegal name server address was specified. **Replacement part/number:** FF:-/FF **Action:** Recheck the name server address. **Error level/report level/error detection source:** Notice/:0/:XSCF
501031FF	**Message:** Name server initialization failed **Explanation:** Initialization of the name server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the name server environment. **Error level/report level/error detection source:** Notice/:0/:XSCF
501040FF	**Message:** SMTP server set by hostname, but DNS disable **Explanation:** When the DNS function was disabled, the host name of SMTP server was specified. **Replacement part/number:** FF:-/FF **Action:** Enable the DNS function or specify the IP address of SMTP server in Machine Administration Menu. **Error level/report level/error detection source:** Notice/:0/:XSCF

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501041FF	**Message:** POP server not specified **Explanation:** When the POP Authentication Function was enabled, the pop server was not specified. **Replacement part/number:** FF:-/FF **Action:** Specify the POP server in Machine Administration Menu. **Error level/report level/error detection source:** Notice/:0/:XSCF
501042FF	**Message:** POP server set by hostname, but DNS disable **Explanation:** When the DNS function was disabled, the host name of POP server was specified. **Replacement part/number:** FF:-/FF **Action:** Enable the DNS function or specify the IP address of POP server in Machine Administration Menu. **Error level/report level/error detection source:** Notice/:0/:XSCF
501043FF	**Message:** Illegal POP server specified **Explanation:** An illegal POP server was specified. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server name. **Error level/report level/error detection source:** Notice/:0/:XSCF
501044FF	**Message:** POP user name not specified **Explanation:** When the POP Authentication Function was enabled, the pop user name was not specified. **Replacement part/number:** FF:-/FF **Action:** Specify the POP user name in Machine Administration Menu. **Error level/report level/error detection source:** Notice/:0/:XSCF
501045FF	**Message:** Illegal POP user name specified **Explanation:** An illegal POP user name was specified. **Replacement part/number:** FF:-/FF **Action:** Recheck the pop user name . **Error level/report level/error detection source:** Notice/:0/:XSCF
501046FF	**Message:** Illegal POP password specified **Explanation:** An illegal POP password was specified. **Replacement part/number:** FF:-/FF **Action:** Set the pop password again. **Error level/report level/error detection source:** Notice/:0/:XSCF
501047FF	**Message:** Illegal POP Authentic method specified **Explanation:** An illegal POP Authentication method was specified for a reason related to firmware. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
501048FF	**Message:** Illegal SMTP server or POP server specified **Explanation:** An illegal SMTP Server or POP Authentication method was specified for a reason related to firmware. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
501049FF	**Message:** Destination address is not specified **Explanation:** A destination address was not specified. **Replacement part/number:** FF:-/FF **Action:** Specify the destination mail address. **Error level/report level/error detection source:** Notice/:0/:XSCF
501050FF	**Message:** Sender address is not specified **Explanation:** A sender address was not specified. **Replacement part/number:** FF:-/FF **Action:** Specify the sender address. **Error level/report level/error detection source:** Notice/:0/:XSCF

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6100000n	**Message:** Mail:illegal POP server#n specified **Explanation:** An illegal POP server name was specified. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server name. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100100n	**Message:** Mail:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100110n	**Message:** Mail:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100120n	**Message:** Mail:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100130n	**Message:** Mail:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. POP server#n was not found. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100140n	**Message:** Mail:communication to name server timeout **Explanation:** Name Resolution of POP server failed. The timeout occurred by the Name server. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server or the Name server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100150n	**Message:** Mail:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100160n	**Message:** Mail:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100170n	**Message:** Mail:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100180n	**Message:** Mail:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF

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6100190n	**Message:** Mail:name server invalid **Explanation:** Name Resolution of POP server failed. The Name server was not specified. **Replacement part/number:** FF:-/FF **Action:** Specify the Name server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100210n	**Message:** Mail:communication to POP server#n failed **Explanation:** The communication failure to POP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100220n	**Message:** Mail:authentication of POP server#n failed **Explanation:** The authentication failure in POP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server name or the POP user name or password. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100230n	**Message:** Mail:communication to POP server#n failed **Explanation:** The communication failure to POP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100240n	**Message:** Mail:communication to POP server#n timeout **Explanation:** The timeout occurred by the POP server#n. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100250n	**Message:** Mail:communication to POP server#n failed **Explanation:** The communication failure to POP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100310n	**Message:** Mail:communication to POP server#n failed **Explanation:** The communication failure to POP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100320n	**Message:** Mail:communication to POP server#n failed **Explanation:** The communication failure to POP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100330n	**Message:** Mail:communication to POP server#n timeout **Explanation:** The timeout occurred by the POP server#n. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6100340n	**Message:** Mail:communication to POP server#n failed **Explanation:** The communication failure to POP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF

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6101000n	**Message:** Mail:illegal SMTP server#n specified **Explanation:** An illegal SMTP server name was specified. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server name. **Error level/report level/error detection source:** Notice/:0/:XSCF
61010100	**Message:** Mail:no SMTP server specified **Explanation:** SMTP server has not been specified. **Replacement part/number:** FF:-/FF **Action:** Specify SMTP server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6101100n	**Message:** Mail:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6101110n	**Message:** Mail:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6101120n	**Message:** Mail:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6101130n	**Message:** Mail:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. SMTP server#n was not found. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6101140n	**Message:** Mail:communication to name server timeout **Explanation:** Name Resolution of SMTP server failed. The timeout occurred by the Name server. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server or the Name server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6101150n	**Message:** Mail:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6101160n	**Message:** Mail:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6101170n	**Message:** Mail:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF

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6101180n	**Message:** Mail:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6101190n	**Message:** Mail:name server invalid **Explanation:** Name Resolution of SMTP server failed. The Name server was not specified. **Replacement part/number:** FF:-/FF **Action:** Specify ythe Name server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6101210n	**Message:** Mail:setting of SMTP server#n failed **Explanation:** The setting failure of SMTP server#n was detected. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE.Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6101220n	**Message:** Mail:setting of SMTP server#n failed **Explanation:** The setting failure of SMTP server#n was detected. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE.Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6101310n	**Message:** Mail:illegal MAIL-REPORT parameter specified **Explanation:** Illegal the SMTP server name, Destination address, Sender address or XSCF host name was specified. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server name, Destination address, Sender address and XSCF host name. **Error level/report level/error detection source:** Notice/:0/:XSCF
6101320n	**Message:** Mail:communication to SMTP server#n timeout **Explanation:** The timeout occurred by the SMTP server#n. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6101330n	**Message:** Mail:communication to SMTP server#n failed **Explanation:** The communication failure to SMTP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6101340n	**Message:** Mail:communication to SMTP server#n failed **Explanation:** The communication failure to SMTP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110000n	**Message:** REMCS:illegal POP server#n specified **Explanation:** An illegal POP server name was specified. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server name. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110100n	**Message:** REMCS:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF

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6110110n	**Message:** REMCS:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110120n	**Message:** REMCS:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110130n	**Message:** REMCS:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. POP server#n was not found. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110140n	**Message:** REMCS:communication to name server timeout **Explanation:** Name Resolution of POP server failed. The timeout occurred by the Name server. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server or the Name server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110150n	**Message:** REMCS:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110160n	**Message:** REMCS:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110170n	**Message:** REMCS:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110180n	**Message:** REMCS:Name Resolution of POP server#n failed **Explanation:** Name Resolution of POP server failed. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110190n	**Message:** REMCS:name server invalid **Explanation:** Name Resolution of POP server failed. The Name server was not specified. **Replacement part/number:** FF:-/FF **Action:** Specify the Name server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110210n	**Message:** REMCS:communication to POP server#n failed **Explanation:** The communication failure to POP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF

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6110220n	**Message:** REMCS:authentication of POP server#n failed **Explanation:** The authentication failure in POP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server name or the POP user name or password. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110230n	**Message:** REMCS:communication to POP server#n failed **Explanation:** The communication failure to POP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110240n	**Message:** REMCS:communication to POP server#n timeout **Explanation:** The timeout occurred by the POP server#n. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110250n	**Message:** REMCS:communication to POP server#n failed **Explanation:** The communication failure to POP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110310n	**Message:** REMCS:communication to POP server#n failed **Explanation:** The communication failure to POP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110320n	**Message:** REMCS:communication to POP server#n failed **Explanation:** The communication failure to POP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110330n	**Message:** REMCS:communication to POP server#n timeout **Explanation:** The timeout occurred by the POP server#n. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6110340n	**Message:** REMCS:communication to POP server#n failed **Explanation:** The communication failure to POP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Recheck the POP server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6111000n	**Message:** Mail:illegal SMTP server#n specified **Explanation:** An illegal SMTP server name was specified. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server name. **Error level/report level/error detection source:** Notice/:0/:XSCF
61110100	**Message:** REMCS:no SMTP server specified **Explanation:** SMTP server has not been specified. **Replacement part/number:** FF:-/FF **Action:** Specify SMTP server. **Error level/report level/error detection source:** Notice/:0/:XSCF

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6111100n	**Message:** REMCS:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6111110n	**Message:** REMCS:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6111120n	**Message:** REMCS:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6111130n	**Message:** REMCS:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. SMTP server#n was not found. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6111140n	**Message:** REMCS:communication to name server timeout **Explanation:** Name Resolution of SMTP server failed. The timeout occurred by the Name server. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server or the Name server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6111150n	**Message:** REMCS:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6111160n	**Message:** REMCS:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server or the Name server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6111170n	**Message:** REMCS:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6111180n	**Message:** REMCS:Name Resolution of SMTP server#n failed **Explanation:** Name Resolution of SMTP server failed. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6111190n	**Message:** REMCS:name server invalid **Explanation:** Name Resolution of SMTP server failed. The Name server was not specified. **Replacement part/number:** FF:-/FF **Action:** Specify ythe Name server. **Error level/report level/error detection source:** Notice/:0/:XSCF

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6111210n	**Message:** REMCS:setting of SMTP server#n failed **Explanation:** The setting failure of SMTP server#n was detected. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE.Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6111220n	**Message:** REMCS:setting of SMTP server#n failed **Explanation:** The setting failure of SMTP server#n was detected. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE.Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6111310n	**Message:** REMCS:illegal REMCS parameter specified **Explanation:** Illegal the SMTP server name, Destination address, Sender address or XSCF host name was specified. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server name, Destination address, Sender address and XSCF host name. **Error level/report level/error detection source:** Notice/:0/:XSCF
6111320n	**Message:** REMCS:communication to SMTP server#n timeout **Explanation:** The timeout occurred by the SMTP server#n. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server. **Error level/report level/error detection source:** Notice/:0/:XSCF
6111330n	**Message:** REMCS:communication to SMTP server#n failed **Explanation:** The communication failure to SMTP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Recheck the SMTP server. After the re-setting, if it will fail again, needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
6111340n	**Message:** REMCS:communication to SMTP server#n failed **Explanation:** The communication failure to SMTP server#n occurred. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
620000FF	**Message:** REMCS Agent stopped by REMCS library **Explanation:** REMCS library failure occurred. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
620001FF	**Message:** REMCS Agent stopped by REMCS library **Explanation:** REMCS library failure occurred. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
620002FF	**Message:** REMCS Agent stopped by REMCS library **Explanation:** REMCS library failure occurred. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
620003FF	**Message:** REMCS Agent stopped by REMCS library **Explanation:** REMCS library failure occurred. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF

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620004FF	**Message:** REMCS Agent stopped by REMCS library **Explanation:** REMCS library failure occurred. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
620005FF	**Message:** REMCS Agent stopped by REMCS library **Explanation:** REMCS library failure occurred. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
620100FF	**Message:** REMCS Agent stopped by firmware **Explanation:** REMCS Agent stopped by firmware failure. **Replacement part/number:** FF:-/FF **Action:** Needs a dump of XSCF. Contact the system administrator or a FE. **Error level/report level/error detection source:** Notice/:0/:XSCF
81110000	**Message:** This is a TEST log **Explanation:** A test(Warning level) is executed in Machine Administration function. **Replacement part/number:** FE:test/FF **Action:** None. **Error level/report level/error detection source:** Notice/:3/:XSCF
86110000	**Message:** This is a TEST log **Explanation:** A test(Warning level) is executed in XSCF shell function. **Replacement part/number:** FE:test/FF **Action:** None. **Error level/report level/error detection source:** Notice/:3/:XSCF
C1110000	**Message:** This is a TEST log **Explanation:** A test(Alarm level) is executed in Machine Administration function. **Replacement part/number:** FE:test/FF **Action:** None. **Error level/report level/error detection source:** Notice/:3/:XSCF
C6110000	**Message:** This is a TEST log **Explanation:** A test(Alarm level) is executed in XSCF shell function. **Replacement part/number:** FE:test/FF **Action:** None. **Error level/report level/error detection source:** Notice/:3/:XSCF

(*x): yyyy: device address.

Alarm Warnig Notice

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Table B-1-10 Notice-level errors[2]

Error code	Message and explanation
112200F1	**Message:** Probing memory error(Mem config error) **Explanation:** Memory configration error was detected. **Replacement part/number:** FF: -/ FF **Action:** Contact a FE. **Error level/report level/error detection source:** Notice/:0/:POST
xxxB0030 (*p)	**Message:** DTAG Correctable error(DTAG) **Explanation:** A DTAG 1 bit error was detected. **Replacement part/number:** 01: SB/ 00 **Action:** Contact a FE. **Error level/report level/error detection source:** Notice/:0/:POST
xxxD00yy (*p)	**Message:** UPA/Memory Correctable error(zzz#n) (zzz is CPU or SLOT) **Explanation:** A UPA/memory 1 bit error was detected. **Replacement part/number:** 11: CPU/ 0-3 or 21: SLOT/ 00-15 **Action:** Contact a FE. **Error level/report level/error detection source:** Notice/:0/:POST

Table B-1-11 Notice-level errors[3]

Error code	Message and explanation
FE0000FF	**Message:** Unsupported DIMM is mounted (Illegal memory(SLOT#xx)) *1 **Explanation:** Unsupported SLOT(DIMM) is mounted. **Replacement part/number:** 21: SLOT/ 00-15(model 450-R/450-Q) (21: SLOT/ 00-15) *1 **Action:** For models 450-R/450-Q:Replace the SLOT. (Replace the SLOT.) *1 Contact a FE. **Error level/report level/error detection source:** Notice/:0/:OBP

*1 The parentheses contains a **message**, or a **Replacement part/number** or a **Action** at HCP version 10.01 or after.

Table B-1-12 Notice-level errors[4]

Error code	Message and explanation
60000200	**Message:** Part status reset **Explanation:** The failure of parts is recovered. **Replacement part/number:** (*M) **Action:** None. **Error level/report level/error detection source:** Notice/:0/:Machine Administration

(*M): About part number, refer to Table B-1-P for details.

Alarm Warnig Notice

Information
The content of the error messages might be changed because of the function improvement.

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Table B-1-T POST/OBP test phase number

Number: Phase abbreviation: Explanation:	Number: Phase abbreviation: Explanation:	Number: Phase abbreviation: Explanation:
11: RST: Rreset phase	1B: NVRAMRC: NVRAMRC execution phase	27: BOOTOS: OS phase
12: BI1: Inialization-1 phase	1C: PCI: PCI probing phase	28: OSRUN: OS running phase
13: BI2: Initialization-2 phase	1D: SCSI: SCSI probing phase	2A: POFF: Power off phase
14: L1: Initialization-3 phase	1E: NET: NET probing phase	2B: REBOOT: Reboot phase
15: U2P: U2P node phase	1F: ATAPI: IDE probing phase	2C: INIT0: Init 0 phase
16: CTIMER: Timer node phase	21: USB: USB probing phase	2E: RED: RED/WDR/XIR phase
17: BEBUS: Required ebus node phase	23: CONS: Console setting phase	32: WARNING: WARNING phase
18: OBPENV: About EEPROM phase	24: SBINF: Startupphase	33: AutoBootStop: AutoBootStop phase
19: EEBUS: Ebus node phase	25: BOOTP: Boot phase1	A0: Degraded phase by OS
1A: CPU: CPU node phase	26: BOOTB: Boot block phase	

Table B-1-C POST/OBP component

Component number	Component name	Component number	Component name
00,01,...03	CPU#0,#1,...#3	40,41	SCSI#0,SCSI#1
08,0A,0B	U2P#0,#2,#3	42,43	LAN#0,LAN#1
10,12,13	U2P(Timer)#0,#2,#3	44	ATAPI#0
20,21,...28	PCI#00,#01,...#08	45	USBC
30	DTAG	46,47	USB#0,USB#1
31	SC	50,51,...55	PCISERR
32	SCF	60,61,...6F	SLOT#00,#01,..#15
33	TTY-A	80,81,...87	SLOT#00,01 , #02,03 , ...#14,15
34	TTY-B	F0	NO_AVAIL_MEM
35,36,...38	HPC#0,#1,...#3	F1	DIMM_VIOLATION
39	TOD	F2	NO_CPU
3A,3B	FROM#0,FROM#1	F3	NO_MEMORY
3C	SRAM	FF	
3D	PANEL		

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Table B-1-P parts number

Category number(hex)	Replacement part	Parts number
01	SB board	0
02	PANEL board	0
03	PCI board	0
04	SCSI-BP (SCSI Back Panel)	0～1
05	PCI-RISER	0
11	CPU	0～3
21	SLOT(memory)	00～15
22	SLOT group	00～15 (*)
31	FAN	0～7
32	FAN board	0～1
41	PSU	0～2
42	CPUDDC	0～3
43	DDC-A(DDC12)	0
44	DDC-B(DDC21)	0
81	UPS	0
82	(SDU) * Used by ESF	-
83	(BATTERY) * Used by ESF	-
91	DISK	0～5
92	PCI slot	00～08
93	(TAPE) * Used by ESF	-
a1	RCI	FF(hex)
FD	U2P *Not replacement part	0,2,3
FE	Error log for test	FF(hex)
FF	Cannot specified.	FF(hex)
-	IO-BP	0
-	POWER-BD	0
-	PSU-CAGE	0

* : The pair of replacement SLOT number are (00,01), (02,03), .. (14,15)

Next: B.2 XSCF Power Log List

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B.2 XSCF Power Log List

This section lists all power log information displayed when the show-power-logs command is executed on the XSCF console. The following table explains the items in the power log list. For information about a command to display power log and options to the command, see "Chapter6 How to Use the XSCF Command Shell".

Table B-2-1 How to read the power log list

Type	Type of power log and unique code for the type
Source	The hardware source that generated the power event and the unique code
Detailed code	Detailed code in the power log
Explanation	Explains the meaning of the power log item.

The power log items displayed by XSCF are given below.

01:AC-ON 10:SCF Reset 11:SCF Ready 20:Power-on 30:XIR 38:POR 3f:Reset-Rrelease
40:Shutdown(NML) 41:Shutdown(ALM) 42:Power-off 50:ACFAIL

Table B-2-2 Power log items

Type	Source, detailed code, and explanation
01:AC-ON、01:PSU-ON(When the input power source is the DC Type)	**Source:** ff:Nothing **Detailed code:** x00000000 **Explanation:** Power was turned on.
	Source: 0C:UPS **Detailed code:** x02000000 **Explanation:** Power was turned on by power recovery processing. The CPU started to work.
10:SCF Reset	**Source:** ff:Nothing **Detailed code:** x01000000 **Explanation:** The XSCF was reset. XSCF self-reset.
	Source: ff:Nothing **Detailed code:** x02000000 **Explanation:** The XSCF was reset. It was caused by the watchdog timer.
	Source: ff:Nothing **Detailed code:** x03000000 **Explanation:** The XSCF was reset. ESF detected a XSCF trouble then reset was done.
11:SCF Ready	**Source:** ff:Nothing **Detailed code:** x00000000 **Explanation:** The SCF entered the Ready state.
20:Power-on	**Source:** 00:PANEL-SWITCH **Detailed code:** x00000000 **Explanation:** Power-on was executed with the switch on the operating panel.
	Source: 01:NVRAM/TOD **Detailed code:** x00000000 **Explanation:** Power-on was executed by the NVRAM/TOD timer setting.

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	Source: 01:NVRAM/TOD **Detailed code:** x81000000 **Explanation:** Power-on was executed by the NVRAM/TOD timer setting. An XSCF requests power-on of external facility.
	Source: 01:NVRAM/TOD **Detailed code:** x82000000 **Explanation:** Power-on was executed by the NVRAM/TOD timer setting. A delayed startup of the system was performed.
	Source: 02:RCI-IO **Detailed code:** xXX000000 **Explanation:** Power-on was executed by the RCI-IO. XX indicates the node number of RCI-IO instruction source.
	Source: 02:RCI-IO **Detailed code:** x81000000 **Explanation:** Power-on was executed by the RCI-IO. An XSCF requests power-on of external facility..
	Source: 02:RCI-IO **Detailed code:** x82000000 **Explanation:** Power-on was executed by the RCI-IO. A delayed startup of the system was performed.
	Source: 03:SYSTEM-CONSOLE (*pl) **Detailed code:** x00000000 **Explanation:** Power-on was executed from the system console.
	Source: 0C:UPS **Detailed code:** x01000000 **Explanation:** Power was turned on because of recovery from power failure. The power restoration is informed via the UPC.
	Source: 0C:UPS **Detailed code:** x84000000 **Explanation:** Power on sequence, caused by recovery from power failure, was proceeding. A delayed startup of the system was performed.
	Source: 10:RCI-synchronize **Detailed code:** xXX000000 **Explanation:** Power-on was requested to other RCI node. XX indicates the node number, which is requested the power-on by this system.
	Source: 11:LAN **Detailed code:** x00000000 **Explanation:** Power-on was executed via the LAN.
	Source: 11:LAN **Detailed code:** x81000000 **Explanation:** Power-on was executed via the LAN. An XSCF requests power-on of external facility.
	Source: 11:LAN **Detailed code:** x82000000 **Explanation:** Power-on was executed via the LAN. A delayed startup of the system was performed.
	Source: 12:TTY **Detailed code:** x00000000 **Explanation:** Power-on was executed via TTY.
	Source: 12:TTY **Detailed code:** x81000000 **Explanation:** Power-on was executed via TTY. An XSCF requests power-on of external facility.
	Source: 12:TTY **Detailed code:** x82000000 **Explanation:** Power-on was executed via TTY. A delayed startup of the system was performed.
	Source: 13:PC **Detailed code:** x00000000 **Explanation:** Power-on was executed by the PC interface.
	Source: 13:PC **Detailed code:** x81000000 **Explanation:** Power-on was executed by the PC interface. An XSCF requests power-on of external facility.

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	Source: 13:PC **Detailed code:** x82000000 **Explanation:** Power-on was executed by the PC interface. A delayed startup of the system was performed.
	Source: 17:RCI-Host **Detailed code:** xXX000000 **Explanation:** Power-on was requested by the RCI-Host. XX indicates the node number of RCI-Host, which request power-on to this system.
	Source: 17:RCI-Host **Detailed code:** x81000000 **Explanation:** Power-on was executed by the RCI-Host. An XSCF requests power-on of external facility.
	Source: 17:RCI-Host **Detailed code:** x82000000 **Explanation:** Power-on was executed by the RCI-Host. A delayed startup of the system was performed.
	Source: 18:HTTP **Detailed code:** x00000000 **Explanation:** Power-on was executed via HTTP.
	Source: 18:HTTP **Detailed code:** x81000000 **Explanation:** Power-on was executed via HTTP. An XSCF requests power-on of external facility.
	Source: 18:HTTP **Detailed code:** x82000000 **Explanation:** Power-on was executed via HTTP. A delayed startup of the system was performed.
	Source: 80:Retry **Detailed code:** x01000000 **Explanation:** A power-off or a power-on retry was made. The retry is caused by FATAL.
	Source: 80:Retry **Detailed code:** x02000000 **Explanation:** A power-off or a power-on retry was made. The retry is caused by an alive-check error.
	Source: 80:Retry **Detailed code:** x03000000 **Explanation:** A power-off or a power-on retry was retried. The retry is caused by a SPARC instruction.
	Source: 80:Retry **Detailed code:** x04000000 **Explanation:** A power-off or a power-on retry was retried. The retry is caused by a SCF sequence error.
	Source: 80:Retry **Detailed code:** x05000000 **Explanation:** A power-off or a power-on retry was retried. The retry is caused by a firmware update.
	Source: 80:Retry **Detailed code:** x06000000 **Explanation:** A power-off or a power-on retry was retried. The retry is caused by for the server cooling.
30:XIR	**Source:** 00:PANEL-SWITCH **Detailed code:** x00000000 **Explanation:** A reset, type of reset is XIR, was requested from operator panel.
	Source: 03:SYSTEM-CONSOLE (*pl) **Detailed code:** x00000000 **Explanation:** A reset, type is XIR, was requested from system console.
	Source: 05:CPU **Detailed code:** x00000000 **Explanation:** A reset, type of reset is XIR, was requested from CPU.
	Source: 0b:ACK-timeout **Detailed code:** x00000000 **Explanation:** A reset, type of reset is XIR, was requested due to timeout of communication (ACK timeout).

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	Source: 11:LAN **Detailed code:** x00000000 **Explanation:** A reset, type of reset is XIR, was requested via LAN.
	Source: 12:TTY **Detailed code:** x00000000 **Explanation:** A reset, type of reset is XIR, was requested via TTY.
	Source: 18:HTTP **Detailed code:** x00000000 **Explanation:** A reset, type of reset is XIR, was requested via HTTP.
38:POR	**Source:** 00:PANEL-SWITCH **Detailed code:** x00000000 **Explanation:** A reset, type of reset is POR, was requested from operator panel.
	Source: 02:RCI-IO **Detailed code:** xXX000000 **Explanation:** A reset, type of reset is POR, was requested from RCI-IO. XX indicates the node number of RCI-IO, which request reset to this system.
	Source: 03:SYSTEM-CONSOLE (*pl) **Detailed code:** x00000000 **Explanation:** A reset, type of reset is POR, was requested from system console.
	Source: 05:CPU **Detailed code:** x00000000 **Explanation:** A reset, type of reset is POR, was requested from CPU.
	Source: 08:FATAL **Detailed code:** x00000000 **Explanation:** A reset, type of reset is POR, was requested due to detection of FATAL.
	Source: 0b:ACK-timeout **Detailed code:** x00000000 **Explanation:** A reset, type of reset is POR, was requested due to timeout of communication (ACK timeout).
	Source: 11:LAN **Detailed code:** x00000000 **Explanation:** A reset, type of reset is POR, was requested via LAN.
	Source: 12:TTY **Detailed code:** x00000000 **Explanation:** A reset, type of reset is POR, was requested via TTY.
	Source: 17:RCI-Host **Detailed code:** xXX000000 **Explanation:** A reset, type of reset is POR, was requested from RCI-HOST. XX indicates the node number of RCI-HOST, which request reset to this system.
	Source: 18:HTTP **Detailed code:** x00000000 **Explanation:** A reset, type of reset is POR, was requested via HTTP.
	Source: 80:Retry **Detailed code:** x01000000 **Explanation:** A reset, type of reset is POR, was requested due to retry against FATAL problem.
	Source: 80:Retry **Detailed code:** x02000000 **Explanation:** A reset, type of reset is POR, was requested due to failure of alive-check.
	Source: 81:SCF-Self **Detailed code:** x00000000 **Explanation:** A reset, type of reset is POR,.was requested via SCF.
3f:Reset-Release	**Source:** ff:Nothing **Detailed code:** x00000000 **Explanation:** The reset state was released.
40:Shutdown (NML) Normal system	**Source:** 00:PANEL-SWITCH **Detailed code:** x00000000 **Explanation:** A shutdown was requested from operator panel.
	Source: 01:NVRAM/TOD **Detailed code:** x00000000 **Explanation:** A shutdown was requested due to NVRAM/TOD timer setting.

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	Source: 02:RCI-IO **Detailed code:** xXX000000 **Explanation:** A shutdown was requested from RCI-IO. XX indicates the node number of RCI-IO, which request shutdown to this system.
	Source: 03:SYSTEM-CONSOLE (*pl) **Detailed code:** x00000000 **Explanation:** A shutdown was requested from system console.
	Source: 10:RCI-synchronize **Detailed code:** xXX000000 **Explanation:** A shutdown was requested to other RCI node. XX indicates the node number, which is requested the shutdown by this system.
	Source: 11:LAN **Detailed code:** x00000000 **Explanation:** A shutdown was requested via LAN.
	Source: 12:TTY **Detailed code:** x00000000 **Explanation:** A shutdown was requested via TTY.
	Source: 17:RCI-Host **Detailed code:** xXX000000 **Explanation:** A shutdown was requested from RCI-HOST. XX indicates the node number of RCI-HOST, which request shutdown to this system.
	Source: 18:HTTP **Detailed code:** x00000000 **Explanation:** A shutdown was requested via HTTP.
41:Shutdown (ALM) Abnormal system	**Source:** 0C:UPS **Detailed code:** x01000000 **Explanation:** A shutdown was requested because of power failure. The shutdown is informed via UPC.
	Source: 0C:UPS **Detailed code:** x02000000 **Explanation:** A shutdown was requested because of power failure. The shutdown is informed via SPARC.
	Source: 14:Power supply monitoring **Detailed code:** x01000000 **Explanation:** A shutdown was requested because of PSU error.
	Source: 14:Power supply monitoring **Detailed code:** x06000000 **Explanation:** A shutdown was requested because of sensor error.
	Source: 15:FAN monitoring **Detailed code:** x01000000 **Explanation:** A shutdown was requested because of fan error.
	Source: 16:Temperature monitoring **Detailed code:** x01000000 **Explanation:** A shutdown was requested because of CPU temperature error.
	Source: 16:Temperature monitoring **Detailed code:** x06000000 **Explanation:** A shutdown was requested because of sensor error.
42:Power-off	**Source:** 00:PANEL-SWITCH **Detailed code:** x00000000 **Explanation:** Power-off was executed with the switch on the operating panel.
	Source: 01:NVRAM/TOD **Detailed code:** x00000000 **Explanation:** Power-off was executed by the NVRAM/TOD timer setting.
	Source: 02:RCI-IO **Detailed code:** xXX000000 **Explanation:** Power-off was executed from RCI-IO. XX indicates the node number of RCI-IO, which request the power-off to this system.
	Source: 03:SYSTEM-CONSOLE (*pl) **Detailed code:** x00000000 **Explanation:** Power-off was executed from the system console.

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	Source: 05:CPU **Detailed code:** x00000000 **Explanation:** Power-off was executed by CPU.
	Source: 0b:ACK-timeout **Detailed code:** x00000000 **Explanation:** Power-off was executed due to timeout of communication (ACK timeout).
	Source: 0C:UPS **Detailed code:** x00000000 **Explanation:** Power-off was executed because the battery voltage was low. It was caused by a power outage.
	Source: 0C:UPS **Detailed code:** x01000000 **Explanation:** Power-off was executed because of the battery error.
	Source: 11:LAN **Detailed code:** x00000000 **Explanation:** Power-off was executed via LAN.
	Source: 12:TTY **Detailed code:** x00000000 **Explanation:** Power-off was executed via TTY.
	Source: 14:Power supply monitoring **Detailed code:** x01000000 **Explanation:** Power-off was executed because of PSU error.
	Source: 14:Power supply monitoring **Detailed code:** x02000000 **Explanation:** Power-off was executed because of DDC-A error.
	Source: 14:Power supply monitoring **Detailed code:** x03000000 **Explanation:** Power-off was executed because of DDC-B error.
	Source: 14:Power supply monitoring **Detailed code:** x04000000 **Explanation:** Power-off was executed because of CPUDDC error.
	Source: 14:Power supply monitoring **Detailed code:** x05000000 **Explanation:** Power-off was executed because of DDC-C error.
	Source: 16:Temperature monitoring **Detailed code:** x01000000 **Explanation:** Power-off was executed because of CPU temperature error.
	Source: 17:RCI-Host **Detailed code:** xXX000000 **Explanation:** Power-off was executed from RCI-HOST. XX indicates the node number of RCI-HOST, which request the power-off to this system.
	Source: 18:HTTP **Detailed code:** x00000000 **Explanation:** Power-off was executed via HTTP.
	Source: 81:SCF-Self **Detailed code:** x00000000 **Explanation:** Power-off was executed due to during the PON/reset sequence. The power-off is informed via SCF.
50:ACFAIL **50:PSU-OFF(** **When the input power source is the DC Type)**	**Source:** ff:Nothing **Detailed code:** x00000000 **Explanation:** Input power source failure occurred.

(*pl): In PRIMEPOWER250/450, there are no logs from the system console.

01:AC-ON 10:SCF Reset 11:SCF Ready 20:Power-on 30:XIR 38:POR 3f:Reset-Rrelease
40:Shutdown(NML) 41:Shutdown(ALM) 42:Power-off 50:ACFAIL

Information
The content of the power logs might be changed because of the function improvement.

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Next: B.3 XSCF Event Logs List

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B.3 XSCF Event Logs List

This section lists all event log information displayed when the show-event-logs command is executed on the XSCF console. The following table explains the items in event log list. For information about a command to display event log and options to the command, see "Chapter6 How to Use the XSCF Command Shell".

Table B-3-1 How to read the event log list

Source	Type of event causing an entry in the event log and the type code
Detailed code and explanation	Explains the meaning of a detailed code occurring in the event log.

The event log items displayed by the XSCF are given below.

01:FAN 02:Power 03:NVRAM 04:External 05:UPS 06:Thermal 07:PDOWN 08:Nodeself 09:Mount 0a:Change 60:SysInfo 61:Panic 62:Config 71:DevState C0:Console C1:Access C2:Author C3:CPUReq C4:Panel C5:RCI C6:Setup C7:EXTInfo C8:LogAnlyz C9: Tempinfo Ca: SCFshell Cb: Powerlog

Table B-3-2 Event log items

Source	Detailed code and explanation
01:FAN [: Fan error] (*el)	**Detailed code:** xVVnn0000 **Explanation:** A fan error occurred. VV indicates the detailed event and nn indicates the fan number. The definition of VV is as follows: — x01 : Fan speed decreased. — x02 : Rotation of the fan stopped. — x03 : A fan mounting error occurred.

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02:Power [: Power supply error] (*el)	**Detailed code:** xVVnnyy00 **Explanation:** A power supply error occurred. VV indicates the detailed event, nn indicates the voltage type, and yy indicates the power supply unit number. The definition of VV is as follows: — x01 : A low voltage warning occurred. — x02 : A low voltage alarm occurred. — x03 : An overvoltage warning occurred. — x04 : An overvoltage alarm occurred. — x05 : A power supply error occurred. — x11 : A voltage recoverd normally. The definition of nn is as follows: — x01 : An abnormal voltage1(:PSU) — x02 : An abnormal voltage2(:PSU) — x03 : An abnormal voltage3(:PSU) — x04 : An abnormal voltage4(:DDC-B) — x05 : An abnormal voltage5(:DDC-A) — x06 : An abnormal voltage6(:DDC-C) — x07 : An abnormal voltage7(:CPUDDC) — x08 : An abnormal voltage8(:PSU) The definition of yy is as follows: — x1m : PSU, m is PSU number from 0 to 2. — x2m : CPUDDC, m is CPUDDC number from 0 to 3. — x30 : DDC-A — x40 : DDC-B — x50 : DDC-C When VV is "x05, A power supply error occurred", yy is x1m and m is PSU number from 0 to 2. The definitions of nn are as follows: — x80 : Not mounted. — x40 : Alarm level error. — x20 : Warning level error.
03:NVRAM [: Battery error] (*el)	**Detailed code:** x02000000 **Explanation:** A low voltage error occurred.
04:EXTInfo [: External power supply interface error (RCI device only)] (*el)	**Detailed code:** xVVpppp00 **Explanation:** An external power supply interface error (RCI device only) occurred. VV indicates the detailed event and pppp indicates the unit-dependent information. The definition of VV is as follows: — x01 : An error occurred at the interface with the EDPC. — x02 : An error occurred at the interface with the EPC.
05:UPS [: UPS error] (*el)	**Detailed code:** xVVnn0000 **Explanation:** A UPS error occurred. VV indicates the detailed event and nn indicates the UPS number. The definition of VV is as follows: — x01 : The UPS battery voltage is low. — x02 : A UPS alarm occurred.
06:Thermal [: Temperature error] (*el)	**Detailed code:** xVVqq0000 **Explanation:** A temperature error occurred. VV indicates the detailed event and qq indicates the sensor ID. The definition of VV is as follows: — x02 : A high ambient temperature warning occurred. — x04 : A low ambient temperature warning occurred. — x06 : A high CPU temperature warning occurred. — x07 : A high CPU temperature alarm occurred. — x12 : Recovery from he high ambient temperature warning or low ambient temperature warning was successful. — x16 : Recovery from the CPU temperature warning was successful. — x20 : Fan speed increased. — x21 : Fan speed decreased.

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07:PDOWN [: Power outage/power recovery] (*el)	**Detailed code:** xVVqq0000 **Explanation:** A power outage occurred or power was restored. VV indicates the detailed event and qq indicates the detailed information on the source. The definition of VV is as follows: — x01 : A power outage occurred. — x02 : Power was restored.
08:Nodeself [: Node self-error] (*el)	**Detailed code:** x00VVppss **Explanation:** A node-specific error occurred. VV indicates the detailed event, pp indicates the first item of detailed information, and ss indicates the second item of detailed information. The definition of VV is as follows: — x90 : A status check timeout occurred. — x91 : The IO node address was duplicated. — x93 : An unregistered node is found. — x95 : The sensor failed. When VV is "x95, The sensor failed", ss is sensor number. The definitions of pp are as follows: — x01 : The system control bus switcher — x02 : SB thermal sensor — x03 : FAN sensor, ss is x00. — x04 : Inlet sensor — x05 : CPU thermal sensor
09:Mount [: Mount error (RCI device only)]	**Detailed code:** x01mmqq00 **Explanation:** The number of parts was more than the expected value for the installation conditions. mm indicates the part name number and qq indicates the device-dependent information. The definition of mm is as follows: — x01 : Power supply unit — x02 : Fan — x03 : Temperature sensor — x04 : Battery for memory backup — x05 : UPS — x06 : Humidity sensor
	Detailed code: x02mmqq00 **Explanation:** The number of parts was less than the expected value for the installation conditions. mm indicates the part name number and qq indicates the device-dependent information. The definition of mm is the same as described above.
	Detailed code: x03mmqq00 **Explanation:** The mounting location of the part is different from the correct position. mm indicates the part name number and qq indicates the device-dependent information. The definition of mm is the same as described above.
0a:Change [: Status transition event (RCI device only)]	**Detailed code:** xVV000000 **Explanation:** A status transition event for the device occurred. The definition of VV is as follows: — x01 : The status of the power supply unit changed. — x02 : The status of the fan changed. — x03 : The status of the temperature sensor changed. — x04 : The status of the battery for memory backup changed. — x05 : The status of the UPS changed. — x06 : The status of the humidity sensor changed. — x07 : The status of the HDD changed.
60:SysInfo [: System status report]	**Detailed code:** xVV000000 **Explanation:** The system status was reported. The definition of VV is as follows: — x00 : Power-off — x01 : Panic happened. — x02 : Startup after a shutdown — x08 : Initialization phase — x09 : Boot processing — x0a : The system is in the running state.
61:Panic [: Panic report]	**Detailed code:** x00000000 **Explanation:** Panic happened.

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62:Config [: Unit configuration change]	**Detailed code:** x01mmqqss yyyyyyyy yyyyyyyy yyyyyyyy yyyyyyyy **Explanation:** A part was added. mm indicates the part name number, qq the part number, ss the old unit status, y's the the serial number after replacement without FAN or PSU. The definition of mm is as follows: — x02 : Fan — x03 : PSU — x05 : Panel — x06 : SB — x10 : CPU — x11 : Slot — x12 : PCI-BD — x13 : SCSI-BD The definition of ss is as follows: (The ss is zero when mm is FAN or PSU.) The ss the old unit status : 0 7 — bit 0 : valid bit — bit 1 : Mount information — bits 2-3 : Reserved — bit 4 : Alarm level — bit5 : Warning level — bit6 : Notice level / Standby level — bit7 : Sensor abnormal
	Detailed code: x02mmqqss yyyyyyyy yyyyyyyy yyyyyyyy yyyyyyyy **Explanation:** The part was removed. The definitions from mm to ss are the same as described above. y's the the serial number before replacement without FAN or PSU.
	Detailed code: x81mmqq00 **Explanation:** A fault part was added. The definitions from mm to qq are the same as described above.
71:DevState [: Unit status display]	**Detailed code:** xqqqqqqqq **Explanation:** The status of the unit was displayed. qqqqqqqq indicates the unit-dependent command parameter.
C0:Console [: Console event]	**Detailed code:** xVVpp0000 **Explanation:** A console event occurred. VV indicates the detailed event. pp indicates the switching source. The definition of VV is as follows: — x01 : The console was switched from the TTY-A console to the SCF-LAN console. — x02 : The console was switched from the SCF-LAN console to the TTY-A console. The definition of pp is as follows: — x00 : The console was switched by Machine Administration Menu. — x01 : The console was switched by SCF Shell.
C1:Access [: SCF access event]	**Detailed code:** xVVmm0000 xxxxxxxx yyyyyyyy yyyyyyyy **Explanation:** An SCF access event occurred. VV indicates the access type, mm the login/logout status, xxxxxxxx the IP address of the access source, and yy.... the account name. The definition of VV is as follows: — x10 : Access to XSCF by telnet RW. — x12 : Access to the telnet shell. — x20 : Access to the SSL. — x21 : Access to the HTTP. — x40 : Access to the serial port. — x50 : Access to the SSH RW(port 22). — x51 : Access to the shell(port 8810) by SSH. — x52 : Access to the SSH RO(port 8811). — x53 : Access to the SSH RO(port 8812). The definition of mm is as follows: — x01 : Logged in to the SCF. — x02 : Logged out from SCF. — x03 : SCF forcibly disconnect user session due to inactivity timeout.

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C2:Author [: Authentication failure event]	**Detailed code:** xVV000000 xxxxxxxx yyyyyyyy yyyyyyyy **Explanation:** An authentication failure event occurred when SCF was accessed. VV indicates the access type, xxxxxxxx the IP address of the access source, and yy.... the account name that failed last. The definition of VV is as follows: — x10 : Access to XSCF by telnet RW. — x12 : Access to the telnet shell. — x20 : Access to the SSL. — x21 : Access to the HTTP. — x40 : Access to the serial port. — x50 : Access to the SSH RW(port 22). — x51 : Access to the shell(port 8810) by SSH. — x52 : Access to the SSH RO(port 8811). — x53 : Access to the SSH RO(port 8812).
C3:CPUReq. [: SPARC request]	**Detailed code:** xVV000000 nnyyyyyy nnyyyyyy nnyyyyyy **Explanation:** A request was sent from XSCF to SPARC . VV indicates the detailed event. The definition of VV is as follows: — x01 : Request to SPARC for shutdown. nn indicates the event code. yy... indicates the Detailed code byte 0-2. Detailed code byte 8-F are ignored. — x02 : Request to SPARC for power-off — x03 : Request to SPARC for log collection — x04 : Request to SPARC for information in the event log — x05 : Request to SPARC to collect dump of XSCF memory — x06 : Request to SPARC for event. nn indicates the event code. yy... indicates the Detailed code byte 0-2.
C4:Panel [: Panel operation event]	**Detailed code:** x01mm0000 **Explanation:** A panel operation event occurred. mm indicates the button operation number. The definition of mm is as follows: — x01 : The POWER switch button was pressed in a short operation. — x02 : The RESET switch button was pressed in a short operation. — x03 : The Request switch button was pressed in a short operation. — x81 : The POWER switch button was pressed for a long time. — x83 : The Request switch button was pressed for a long time.
	Detailed code: x02mm0000 **Explanation:** A panel operation event for the mode switch occurred. mm indicates the mode switch operation number. The definition of mm is as follows: — x01 : The mode switch was set to maintenance mode. — x40 : The mode switch was set to unlock mode. — x80 : The mode switch was set to lock mode.
	Detailed code: x03mmqq00 **Explanation:** A switch operation event for the remote panel occurred. mm indicates the button operation number and qq indicates whether the operation was valid. The definition of mm is as follows: — x01 : The POWER switch button was pressed in a normal operation. — x02 : The RESET switch button was pressed in a normal operation. — x03 : The Request switch button was pressed in a normal operation. — x81 : The POWER switch button was pressed for a long time. The definition of qq is as follows: — x01 : The operation was valid. — x02 : The operation was not valid.
C5:RCI [: RCI event]	**Detailed code:** x01000000 **Explanation:** Power-off request is sent to an IO device.
	Detailed code: x02000000 **Explanation:** Switched to be the master of the RCI network.

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	Detailed code: x1000mmnn **Explanation:** The RCI sending event was executed. The definition of mm is as follows: — x00 : It was executed except Shutdown. — x80 : Shutdown was executed. The definition of nn is as follows: — x06 : Power on was executed. — x07 : Shutdown was executed. — x08 : POR reset was executed. — x0a : Panic was occurred. — x0b : I/O Power off was executed.
	Detailed code: x20nnnnnn nnnnnnnn nnnnnnnn nnnnnnnn **Explanation:** The RCI receiving event was executed when Power on, Shutdown, Forced power off or POR reset was executed. nn.. is packet data of RCI communication. But the Detailed code is “x20000061” when Panic was executed.
	Detailed code: x30000000 00nnnn00 **Explanation:** The RCI initial operation was executed. nnnn is an initial address.
	Detailed code: x31000000 nnnnnnnn **Explanation:** The RCI initial configuration was executed. nn.. is Node ID.
	Detailed code: x32000000 nnnnnnnn **Explanation:** The RCI initial configuration was executed again. nn.. is Node ID.
	Detailed code: x3F0000rr **Explanation:** The RCI configuration result was shown. nn is result value.
	Detailed code: x80ppsstt **Explanation:** The RCI device is recovered from failure state by retry. ppsstt indicates the detailed information.
C6:Setup [:Setup-related]	**Detailed code:** xVV000000 nnnnnnnn nnnnnnnn **Explanation:** An event, related to installation or replacement of hardware, occurred. VV indicates the detailed event and nn.. indicates the serial number after replacement. (0 at the SB-PANEL disagreement.) The definition of VV is as follows: — x01 : The SB was replaced with spare part. — x02 : The panel was replaced with spare part. — x80 : The SB-PANEL did not match.
C7:External [: Extended system status report]	**Detailed code:** xVVqq0000 **Explanation:** An extended system status report event occurred. VV indicates the detailed event and qq indicates the status code. The definition of VV is as follows: — x81 : "OBP complete" was reported. — x82 : "Suspend start" was reported. — x83 : "Suspend" was reported. — x84 : "Resume" was reported. The definition of qq is as follows: — x00 : Normal — x01 : Abnormal
C8:LogAnlyz [: Hardware log analysis]	**Detailed code:** x01qq0000 **Explanation:** Hardware log analysis started. qq indicates the log category. The definition of qq is as follows: — x01 : Analysis was started by the log request. — x02 : Fatal error log analysis was started.
	Detailed code: x02qq0000 nnnnnnnn **Explanation:** Hardware log analysis finished. qq indicates the end code. The definition of qq is as follows: — x01 : Normal end. nn... indicates the latch code. — xFF : Abnormal end. nn... indicates the fault detection number.
	Detailed code: x03qq0000 nnnnnnnn **Explanation:** XSCF ignores events. qq indicates the source and nn... indicates the latch code. The definition of qq is as follows: — x01 : XSCF does not take a log, because it's expected and igonoreable problem. — x02 : XSCF does not take a log, because attribute is inconsistent. — x03 : The bit was disabled because of a receive_latch.

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	Detailed code: x04qqss00 nnnnnnnn **Explanation:** A Resion code was detected. qq indicates a priority level from 1 to 99, ss indicates the order of the detected Resion code from 1 to 50, and nn... indicates the latch code.
C9:Tempinfo [: Temperature change event]	**Detailed code:** xVVqqppss jjkkllmm **Explanation:** A change in temperature occurred. VV indicates the detailed event, qq indicates the inlet temperature, pp indicates SB temperature 1, ss indicates SB temperature 2, and jj to mm indicate the temperature of CPU0 to CPU3. The definition of VV is as follows: — x02 : A high ambient temperature warning occurred. — x04 : A low ambient temperature warning occurred. — x06 : A high CPU temperature warning occurred. — x07 : A high CPU temperature alarm occurred. — x12 : Recovery from the high ambient temperature warning or low ambient temperature warning was successful. — x16 : Recovery from the CPU temperature warning was successful. — x20 : Fan speed increased. — x21 : Fan speed decreased. — x30 : The PSU cooling (Power/power-off is retried) is done by control of the monitoring for foreseeable fault. qq indicates the inlet temperature, pp indicates PSU number, ss-mm are ignored
Ca:SCFshell [: SCF shell event]	**Detailed code:** xVV000000 **Explanation:** A XSCF shell command issued. VV indicates the detailed event. The definition of VV is as follows: — x00 : XSCF exited from maintenance mode. — x01 : XSCF entered maintenance mode.
Cb:Powerlog [: Power event]	**Detailed code:** xVV000000 **Explanation:** The power event occurred. The definition of VV is as follows: — x01 : Power was supplied. — x10 : SCF reset was occurred. — x11 : The SCF entered the Ready state. — x20 : Power-on was executed. — x30 : A reset ,type of reset is XIR was requested. — x3F : The reset state was released. — x40 : A shutdown was requested. — x41 : A shutdown was requested(Abnormal system). — x42 : Power-off was executed. — x50 : Input power source failure occurred.

*el For the events indicated by Source codes X01 to X08, because RCI specific data is displayed when the source of the event is the RCI device, the displayed data does not match the definition shown in the table.

note:

About Source codes X01 to X3f, X80 is added to those codes when A shutdown request is executed.

01:FAN 02:Power 03:NVRAM 04:External 05:UPS 06:Thermal 07:PDOWN 08:Nodeself 09:Mount 0a:Change 60:SysInfo 61:Panic 62:Config 71:DevState C0:Console C1:Access C2:Author C3:CPUReq C4:Panel C5:RCI C6:Setup C7:EXTInfo C8:LogAnlyz C9: Tempinfo Ca: SCFshell Cb: Powerlog

Information

The content of the event logs might be changed because of the function improvement.

Next: B.4 XSCF Error Code Table

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B.4 XSCF Error Code Table

The table below lists the error codes that appear in error logs displayed when the show-error-logs command is executed. Clicking a code enables you to jump to an explanation of the appropriate log. For the error logs list, see "XSCF Error Log List and Actions" in Section B.1.

Table B-4-1 XSCF error code table

40000000 and up	408055FF
41000000 and up	41100000 41100100 41110000
42000000 and up	4201010n**(Alarm)** 4201010n**(Warning)** 4201010n**(Notice)** 4201030n 4201040n 4201810n 4201840n 42040100 42040300 4204030n 420403FF 4204040n 42048100
43000000 and up	430102FF 430103FF 430E060n 431501FF 431601FF 431602FF 431605FF 431606FF 431607FF
44000000 and up	44yyyyA0 44yyyyE0
46000000 and up	46110000
4D000000 and up	4D000700 4D0008FF
4E000000 and up	4E07200n 4E200800 4E20F00n 4E20F50n 4E20F600
50000000 and up	500001FF 500002FF 500003FF 500004FF 500110FF 500111FF 500112FF 500113FF 500114FF 500115FF 500120FF 500121FF 500130FF 500131FF 500132FF 500133FF 500134FF 500135FF 500136FF 500137FF 500140FF 500141FF 500142FF 500143FF 500144FF 500145FF 500146FF 500147FF 500150FF 500151FF 500152FF 500153FF 500154FF 500160FF 500161FF 500162FF 500163FF 500164FF 500165FF 500170FF
50100000 and up	501001FF 501002FF 501003FF 501004FF 501010FF 501011FF 501012FF 501013FF 501020FF 501030FF 501031FF 501040FF 501041FF 501042FF 501043FF 501044FF 501045FF 501046FF 501047FF 501048FF 501049FF 501050FF 5080000n
61000000 andup	6100000n 6100100n 6100110n 6100120n 6100130n 6100140n 6100150n 6100160n 6100170n 6100180n 6100190n 6100210n 6100220n 6100230n 6100240n 6100250n 6100310n 6100320n 6100330n 6100340n 6101000n 61010100 6101100n 6101110n 6101120n 6101130n 6101140n 6101150n 6101160n 6101170n 6101180n 6101190n 6101210n 6101220n 6101310n 6101320n 6101330n 6101340n

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61100000 andup	6110000n 6110100n 6110110n 6110120n 6110130n 6110140n 6110150n 6110160n 6110170n 6110180n 6110190n 6110210n 6110220n 6110230n 6110240n 6110250n 6110310n 6110320n 6110330n 6110340n 6111000n 61110100 6111100n 6111110n 6111120n 6111130n 6111140n 6111150n 6111160n 6111170n 6111180n 6111190n 6111210n 6111220n 6111310n 6111320n 6111330n 6111340n
61200000 andup	612000FF 612002FF
62000000 andup	620000FF 620001FF 620002FF 620003FF 620004FF 620005FF 620100FF
80000000 and up	80805100 80805400 80805600 80809000 80809100 80809300
81000000 and up	81110000
82000000 and up	8201020n 8201050n 82050100
83000000 and up	830101FF 830104FF 83020100 8306010n 83080100 830B010n 830B0500 830B090n 830B0B00 830B0D0n 830B0F0n 830B110n 830B130n 830E000n
83100000 and up	8310010n 8310020n 8311000n 8311010n 83120000 83120100 8313000n 8313010n 8314000n 8314010n
84000000 and up	84yyyy01 84yyyy02 84yyyy03 84yyyy04 84yyyy05 84yyyy06 84yyyy07 84yyyy08 84yyyy09 84yyyyF1 84yyyyF2 84yyyyF3 84yyyyF4
86000000 and up	86110000
87000000 and up	870005FF
8D000000 and up	8D000500
8E000000 and up	8E07200n 8E07300n 8E208500 8E208600 8E208700 8E208800 8E208900 8E20F30n 8E20F40n 8E20F700 8E20F800 8E20FA00 8E20FB0n
90800000 and up	9080000n
C0800000 and up	C0800000 C0800100 C0800200 C0800300 C0800400 C0800500 C0800600 C0800700 C0800800 C0800900 C0800A00 C0800B00 C0800C00 C0800D00 C0800E00 C0801000 C0801100 C0801200 C0802000 C0803000 C0803100 C0803200 C0804000 C0804100 C0805000 C0805300 C0806000 C0806100 C0807000 C0807100 C0807200 C0808000 C0808100 C0809200 C080F000
C1000000 and up	C1000100 C1000200 C1001100 C1001200 C1001300 C1002100 C1110000
C2000000 and up	C201020n C201030n C2010400 C20106FF C20107FF**(Alarm)**

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	C20107FF**(Warning)** C202010n C202020n C202030n C202040n C202050n C202060n C20301FF C20302FF C203030n C2040200
C2100000 and up	C2111000 C2111100 C2111200 C2120100 C2120200 C2120300 C2120400 C2130100 C2130300 C2130400
C3000000 and up	C3010000 C3020000 C3030000 C3040000 C3050000 C306000n C306020n C306030n C307000n C3080000 C309000n C30A000n C30B000n C30B020n C30B0600 C30B0A0n C30B0C00 C30B0E0n C30B100n C30B120n C30B140n C30C0000 C30C0100 C30D000n C30D010n C30E010n**(Alarm)** C30E010n**(Warning)** C30E020n C30E030n C30E040n C30E050n C30F0000
C3100000 and up	C310000n C3160300 C3160400 C3170000
C4000000 and up	C4yyyy1n C4yyyy2n C4yyyy3n C4yyyy4n C4yyyy5n C4yyyy6n C4yyyy7n C4yyyy8n C4yyyy9n
C6000000 and up	C6110000
C7000000 and up	C7000100 C7000200 C7000300 C7000400
CD000000 and up	CD000100 CD000200 CD000300 CD000400 CD000600
CE000000 and up	CE01000n CE02000n CE03000n CE0301FF CE030200 CE0303FF CE0304FF CE03050n CE04000n CE040100 CE04020n CE04030n CE07100n CE080000 CE09000n CE0A0000
CE200000 and up	CE20010n CE20020n CE20040n CE200700 CE200900 CE201000 CE201200 CE201300 CE20150n CE209400 CE209500 CE209600 CE209700 CE209800 CE209900 CE20F10n CE20F200 CE20FB00
D0800000 and up	D080000n
DF000100 and up	DF000100 DF001000

Table B-4-2 POST error code table

02000000and up	020000F2 0300003A 0300003B 0310003C 0320003C 0330003C 04000031
05000000and up	05000032 05010032 0510000n 0511000n 07000031 0701000n 07020030 07030031 070400XX 07060030 070500XX 0710000n 0711000n 0712000n 0713000n 07140031 080000XX 0801000X 0900000n 0910000n 0A00000X 0A1z000X 0C00000X

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10000000and up	10000030 10010030 10100030 1120006n 1121006n 112200F1 112300F0 120z00XX 140z000n 141z000n 142z000n
15000000and up	150z000n 151000XX 151100XX 152z00XX 153z00XX 154z00XX 1560002n 16000039 16100033 162000XX 170v0042 171v0042 172v0042 173v0042 1740004n 17500043 17600044 17700045 17710045
80000000and up	8xx008yy 8xx00Ayy 8xx030yy 8xx032yy 8xx034yy 8xx04Wyy 8xx060yy 8xx063yy 8xx064yy 8xx068yy 8xx06Cyy 8xxTTTyy
90000000and up	9xx008yy 9xx00Ayy 9xx030yy 9xx032yy 9xx034yy 9xx04Wyy 9xx060yy 9xx063yy 9xx064yy 9xx068yy 9xx06Cyy 9xxTTTyy 921032XX 921063XX
xx000000and up	xxxB0030 xxxC000n xxxD00yy

Table B-4-3 OBP error code table

10000000and up	1100000n 1108020n 1108050n 1108TT00 120000FF 1300000X 140000FF 1500000X 1600000X 1700000X 1800000X 1810003D 1820003D 190000FF 1A00000n 1A0000FF 1B0000FF 1C00002n 1D00004n 1E0000XX 1F000044
20000000and up	21000045 230000FF 240000FF 250000FF 250000FF_(2) 251000XX 252000XX 253000XX 254000XX 255000XX 256000XX 25700044 260000FF 261000XX 262000XX 263000XX 264000XX 265000XX 266000XX 270000FF 271000XX 272000XX 273000XX 274000XX 275000XX 276000XX 280000FF 281000FF 2A0000FF 2B0000FF 2C0000FF 2E00000n 2E10000n 2E200000 33000039 330000FF 330000FF_(2)
A0000000and up	A000000n A010006n A02000XX A030001n A040002n A050004n A0600044 A07000XX A0900033 A0A00034
B0000000and up	B0000039 B0200032 B030003d B04000XX
F0000000and up	FE0000FF FF0000FF
xx000000and up	xx0000FF xx0864yy xx0868yy xx0832yy xx080ayy xx0810yy

Table B-4-4 Machine Administration error code table

60000000～	60000200 A0000100 E0000100

Next: "Appendix C XSCF MIB "

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Appendix C XSCF MIB

This chapter explains MIB(Management Infomation Base) that supported by the XSCF SNMP agent function.

This appendix has the following contents.

Contents:

C.1 MIB Object ID C-2
C.2 Standard MIB C-3
C.3 Fujitsu Extended MIB C-7
C.4 TRAP C-9

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C.1 MIB Object ID

The below explains the MIB object identifier supported by the XSCF.

internet	OBJECT IDENTIFIER ::=	{ iso org(3) dod(6) 1 }
directory	OBJECT IDENTIFIER ::=	{ internet 1 }
mgmt	OBJECT IDENTIFIER ::=	{ internet 2 }
experimental	OBJECT IDENTIFIER ::=	{ internet 3 }
private	OBJECT IDENTIFIER ::=	{ internet 4 }
mib-2	OBJECT IDENTIFIER ::=	{ mgmt 1 }
system	OBJECT IDENTIFIER ::=	{ mib-2 1 }
interfaces	OBJECT IDENTIFIER ::=	{ mib-2 2 }
at	OBJECT IDENTIFIER ::=	{ mib-2 3 }
ip	OBJECT IDENTIFIER ::=	{ mib-2 4 }
icmp	OBJECT IDENTIFIER ::=	{ mib-2 5 }
tcp	OBJECT IDENTIFIER ::=	{ mib-2 6 }
udp	OBJECT IDENTIFIER ::=	{ mib-2 7 }
snmp	OBJECT IDENTIFIER ::=	{ mib-2 11 }
enterprises	OBJECT IDENTIFIER ::=	{ private 1 }
fujitsu	OBJECT IDENTIFIER ::=	{ enterprises 211 }
product	OBJECT IDENTIFIER ::=	{ fujitsu 1 }
solaris	OBJECT IDENTIFIER ::=	{ product 15 }
primepower	OBJECT IDENTIFIER ::=	{ solaris 2 }
scfObjects	OBJECT IDENTIFIER ::=	{ primepower 1 }
scfInfo	OBJECT IDENTIFIER ::=	{ scfObjects 1 }
scfState	OBJECT IDENTIFIER ::=	{ scfObjects 2 }
scfTrapParams	OBJECT IDENTIFIER ::=	{ scfObjects 3 }
scfMonitor	OBJECT IDENTIFIER ::=	{ scfObjects 4 }
application	OBJECT IDENTIFIER ::=	{ fujitsu 4 }
aplNetwork	OBJECT IDENTIFIER ::=	{ application 1 }
aplNetFunction	OBJECT IDENTIFIER ::=	{ aplNetwork 3 }
aplNetSCF	OBJECT IDENTIFIER ::=	{ aplNetFunction 40 }

Next：C.2 Standard MIB

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C.2 Standard MIB

The tables below explain the Standard MIB(MIB-□) lists supported by the XSCF.

1. system group

Table C-1 system group

MIB	OBJECT ID	SYNTAX	RW(*1)
sysDescr	system.1	DisplayString	R
sysObjectID	system.2	ObjectID	R
sysUpTime	system.3	TimeTicks	R
sysContact	system.4	DisplayString	R
sysName	system.5	DisplayString	R
sysLocation	system.6	DisplayString	R
sysServices	system.7	INTEGER	R

(*1):R:Read-Only、R/W:Read-Write、NA: Not-Access

2. interface group

Table C-2 interface group

MIB	OBJECT ID	SYNTAX	RW
ifNumber	interfaces.1	INTEGER	R
ifTable	interfaces.2	Aggregate	NA
ifEntry	ifTable.1	Aggregate	NA
ifIndex	ifEntry.1	INTEGER	R
ifDescr	ifEntry.2	DisplayString	R
ifType	ifEntry.3	INTEGER	R
ifMtu	ifEntry.4	INTEGER	R
ifSpeed	ifEntry.5	Gauge	R
ifPhysAddress	ifEntry.6	PhysAddress	R
ifAdminStatus	ifEntry.7	INTEGER	R
ifOperStatus	ifEntry.8	INTEGER	R
ifLastChange	ifEntry.9	TimeTicks	R
ifInOctets	ifEntry.10	Counter	R
ifInUcastPkts	ifEntry.11	Counter	R
ifInNUcastPkts	ifEntry.12	Counter	R
ifInDiscards	ifEntry.13	Counter	R
ifInErrors	ifEntry.14	Counter	R
ifInUnknownProtos	ifEntry.15	Counter	R
ifOutOctets	ifEntry.16	Counter	R
ifOutUcastPkts	ifEntry.17	Counter	R
ifOutNUcastPkts	ifEntry.18	Counter	R
ifOutDiscards	ifEntry.19	Counter	R
ifOutErrors	ifEntry.20	Counter	R
ifOutQLen	ifEntry.21	Gauge	R
ifSpecific	ifEntry.22	ObjectID	R

3. at group

Table C-3 at group

MIB	OBJECT ID	SYNTAX	RW
atTable	at.1	Aggregate	NA
atEntry	atTable.1	Aggregate	NA
atIfIndex	atEntry.1	INTEGER	R
atPhysAddress	atEntry.2	PhysAddress	R
atNetAddress	atEntry.3	NetworkAddress	R

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4. ip group

Table C-4 ip group

MIB	OBJECT ID	SYNTAX	RW
ipForwarding	ip.1	INTEGER	R
ipDefaultTTL	ip.2	INTEGER	R
ipInReceives	ip.3	Counter	R
ipInHdrErrors	ip.4	Counter	R
ipInAddrErrors	ip.5	Counter	R
ipForwDatagrams	ip.6	Counter	R
ipInUnknownProtos	ip.7	Counter	R
ipInDiscards	ip.8	Counter	R
ipInDelivers	ip.9	Counter	R
ipOutRequests	ip.10	Counter	R
ipOutDiscards	ip.11	Counter	R
ipOutNoRoutes	ip.12	Counter	R
ipReasmTimeout	ip.13	INTEGER	R
ipReasmReqds	ip.14	Counter	R
ipReasmOKs	ip.15	Counter	R
ipReasmFails	ip.16	Counter	R
ipFragOKs	ip.17	Counter	R
ipFragFails	ip.18	Counter	R
ipFragCreates	ip.19	Counter	R
ipAddrTable	ip.20	Aggregate	NA
ipAddrEntry	ipAddrTable.1	Aggregate	NA
ipAdEntAddr	ipAddrEntry.1	IpAddress	R
ipAdEntIfIndex	ipAddrEntry.2	INTEGER	R
ipAdEntNetMask	ipAddrEntry.3	IpAddress	R
ipAdEntBcastAddr	ipAddrEntry.4	INTEGER	R
ipAdEntReasmMaxSize	ipAddrEntry.5	INTEGER	R
ipRouteTable	ip.21	Aggregate	NA
ipRouteEntry	ipRouteTable.1	Aggregate	NA
ipRouteDest	ipRouteEntry.1	IpAddress	R
ipRouteIfIndex	ipRouteEntry.2	INTEGER	R
ipRouteMetric1	ipRouteEntry.3	INTEGER	R
ipRouteMetric2	ipRouteEntry.4	INTEGER	R
ipRouteMetric3	ipRouteEntry.5	INTEGER	R
ipRouteMetric4	ipRouteEntry.6	INTEGER	R
ipRouteNextHop	ipRouteEntry.7	IpAddress	R
ipRouteType	ipRouteEntry.8	INTEGER	R
ipRouteProto	ipRouteEntry.9	INTEGER	R
ipRouteAge	ipRouteEntry.10	INTEGER	R
ipRouteMask	ipRouteEntry.11	IpAddress	R
ipRouteMetric5	ipRouteEntry.12	INTEGER	R
ipRouteInfo	ipRouteEntry.13	ObjectID	R
ipNetToMediaTable	ip.22	Aggregate	NA
ipNetToMediaEntry	ipNetToMediaTable.1	Aggregate	NA
ipNetToMediaIfIndex	ipNetToMediaEntry.1	INTEGER	R
ipNetToMediaPhysAddress	ipNetToMediaEntry.2	PhysAddress	R
ipNetToMediaNetAddress	ipNetToMediaEntry.3	IpAddress	R
ipNetToMediaType	ipNetToMediaEntry.4	INTEGER	R

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5. icmp group

Table C-5 icmp group

MIB	OBJECT ID	SYNTAX	RW
icmpInMsgs	icmp.1	Counter	R
icmpInErrors	icmp.2	Counter	R
icmpInDestUnreachs	icmp.3	Counter	R
icmpInTimeExcds	icmp.4	Counter	R
icmpInParmProbs	icmp.5	Counter	R
icmpInSrcQuenchs	icmp.6	Counter	R
icmpInRedirects	icmp.7	Counter	R
icmpInEchos	icmp.8	Counter	R
icmpInEchoReps	icmp.9	Counter	R
icmpInTimestamps	icmp.10	Counter	R
icmpInTimestampReps	icmp.11	Counter	R
icmpInAddrMasks	icmp.12	Counter	R
icmpInAddrMaskReps	icmp.13	Counter	R
icmpOutMsgs	icmp.14	Counter	R
icmpOutErrors	icmp.15	Counter	R
icmpOutDestUnreachs	icmp.16	Counter	R
icmpOutTimeExcds	icmp.17	Counter	R
icmpOutParmProbs	icmp.18	Counter	R
icmpOutSrcQuenchs	icmp.19	Counter	R
icmpOutRedirects	icmp.20	Counter	R
icmpOutEchos	icmp.21	Counter	R
icmpOutEchoReps	icmp.22	Counter	R
icmpOutTimestamps	icmp.23	Counter	R
icmpOutTimestampReps	icmp.24	Counter	R
icmpOutAddrMasks	icmp.25	Counter	R
icmpOutAddrMaskReps	icmp.26	Counter	R

6. tcp group

Table C-6 tcp group

MIB	OBJECT ID	SYNTAX	RW
tcpRtoAlgorithm	tcp.1	INTEGER	R
tcpRtoMin	tcp.2	INTEGER	R
tcpRtoMax	tcp.3	INTEGER	R
tcpMaxConn	tcp.4	INTEGER	R
tcpActiveOpens	tcp.5	Counter	R
tcpPassiveOpens	tcp.6	Counter	R
tcpAttemptFails	tcp.7	Counter	R
tcpEstabResets	tcp.8	Counter	R
tcpCurrEstab	tcp.9	Gauge	R
tcpInSegs	tcp.10	Counter	R
tcpOutSegs	tcp.11	Counter	R
tcpRetransSegs	tcp.12	Counter	R
tcpConnTable	tcp.13	Aggregate	NA
tcpConnEntry	tcpConnTable.1	Aggregate	NA
tcpConnState	tcpConnEntry.1	INTEGER	R
tcpConnLocalAddress	tcpConnEntry.2	IpAddress	R
tcpConnLocalPort	tcpConnEntry.3	INTEGER	R
tcpConnRemAddress	tcpConnEntry.4	IpAddress	R
tcpConnRemPort	tcpConnEntry.5	INTEGER	R
tcpInErrs	tcp.14	Counter	R
tcpOutRsts	tcp.15	Counter	R

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7. udp group

Table C-7 udp group

MIB	OBJECT ID	SYNTAX	RW
udpInDatagrams	udp.1	Counter	R
udpNoPorts	udp.2	Counter	R
udpInErrors	udp.3	Counter	R
udpOutDatagrams	udp.4	Counter	R
udpTable	udp.5	Aggregate	NA
udpEntry	udpTable.1	Aggregate	NA
udpLocalAddress	udpEntry.1	IpAddress	R
udpLocalPort	udpEntry.2	INTEGER	R

8. snmp group

Table C-8 snmp group

MIB	OBJECT ID	SYNTAX	RW
snmpInPkts	snmp.1	Counter	R
snmpOutPkts	snmp.2	Counter	R
snmpInBadVersions	snmp.3	Counter	R
snmpInBadCommunityNames	snmp.4	Counter	R
snmpInBadCommunityUses	snmp.5	Counter	R
snmpInASNParseErrs	snmp.6	Counter	R
snmpInTotalReqVars	snmp.13	Counter	R
snmpInTotalSetVars	snmp.14	Counter	R
snmpInGetRequests	snmp.15	Counter	R
snmpInGetNexts	snmp.16	Counter	R
snmpInSetRequests	snmp.17	Counter	R
snmpInGetResponses	snmp.18	Counter	R
snmpInTraps	snmp.19	Counter	R
snmpOutTooBigs	snmp.20	Counter	R
snmpOutNoSuchNames	snmp.21	Counter	R
snmpOutBadValues	snmp.22	Counter	R
snmpOutGenErrs	snmp.24	Counter	R
snmpOutGetResponses	snmp.28	Counter	R
snmpOutTraps	snmp.29	Counter	R
snmpEnableAuthenTraps	snmp.30	INTEGER	R

Next： C.3 Fujitsu exteded MIB

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C.3 Fujitsu Extended MIB

The tables below explain the Fujitsu extended MIB lists supported by the XSCF.

1. scfInfo group s

Table C-9 scfInfo group

MIB	OBJECT ID	SYNTAX	R W	CONTENT
scfMachineType	scfInfo.1	DisplayString	R	Model name
scfNumberOfCpu	scfInfo.2	INTEGER	R	Number of installing CPU
scfSysSerial	scfInfo.3	DisplayString	R	Serial Number
scfFirmVersion	scfInfo.4	DisplayString	R	Firmware version
scfHCPVersion	scfInfo.5	DisplayString	R	HCP version
scfServerUpTime (*1)	scfInfo.6	TimeTicks	R	Agent Uptime
scfHostID	scfInfo.7	DisplayString	R	Host ID
scfServerID	scfInfo.8	DisplayString	R	Server ID

2. scfState group

Table C-10 scfState group

MIB	OBJECT ID	SYNTAX	R W	CONTENT
scfHWErrLevel	scfState.1	DisplayString	R	Faulty-parts state (*2)
scfOSStatus	scfState.2	DisplayString	R	OS state
scfDisplay	scfState.3	DisplayString	R	Contents of Remote panel message
scfModeSwitch	scfState.4	DisplayString	R	Mode switch

3. scfTrapParams group

Table C-11 scfTrapParams group

MIB	OBJECT ID	SYNTAX	R W	CONTENT
scfServerName	scfTrapParams.1	DisplayString	R	Host name(OS)
scfTrapTime	scfTrapParams.2	TimeTicks	R	scfServerUpTime value of trap occurred (*1)
scfHWErrComment	scfTrapParams.3	DisplayString	R	Error information (*3)
scfHWConfAddr	scfTrapParams.4	DisplayString	R	Faulty-parts

(*1) scfServerUpTime is the lapsed time since SNMP-AGENT starting. [The unit is 10ms.]

(*2) Because SNMP uses the UDP protocol, trap may not reach a manager when a network path is an abnormal condition. In addition to the surveillance by TRAP, we recommend you to supervise the state of scfHWErrLevel periodically. scfHWErrLevel shows the worst part state in the parts with trap sending (reference: 7.3 "Abot Traps"). It is indicated as the following three kinds of status.

scfHWErrLevel = "No error" or "WARNING" or "ALARM"

(*3): The following shows the format of the error information.

Error generation time [Error code] Error message

The explanation of the Error code and Error message, see "Appendix B XSCF Log Information".

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4. scfMonitor group

Table C-12 scfMonitor group

MIB	OBJECT ID	SYNTAX	R W	CONTENT
scfTemperatureTable	scfMonitor.1	Aggregate	NA	MIB table of temperature
scfTemperatureEntry	scfTemperatureTable.1	Aggregate	NA	
scfTemperaturePartsName	scfTemperatureEntry.1	INTEGER	R	parts name(*1)
scfTemperaturePartsNumber	scfTemperatureEntry.2	INTEGER	R	parts number(*1)
scfTemperatureSubIndex	scfTemperatureEntry.3	INTEGER	R	senser number(*2)
scfTemperatureStatus	scfTemperatureEntry.4	INTEGER	R	status of value(*3)
scfTemperatureValue	scfTemperatureEntry.5	INTEGER	R	value (unit : 0.1 degrees C)
scfVoltageTable	scfMonitor.2	Aggregate	NA	MIB table of voltage
scfVoltageEntry	scfVoltageTable.1	Aggregate	NA	
scfVoltagePartsName	scfVoltageEntry.1	INTEGER	R	parts name(*1)
scfVoltagePartsNumber	scfVoltageEntry.2	INTEGER	R	parts number(*1)
scfVoltageSubIndex	scfVoltageEntry.3	INTEGER	R	senser number(*2)
scfVoltageStatus	scfVoltageEntry.4	INTEGER	R	status of value(*3)
scfVoltageValue	scfVoltageEntry.5	INTEGER	R	value (unit : 0.01 V)
scfRotationTable	scfMonitor.3	Aggregate	NA	MIB table of FAN rotation rate
scfRotationEntry	scfRotationTable.1	Aggregate	NA	
scfRotationPartsName	scfRotationEntry.1	INTEGER	R	parts name(*1)
scfRotationPartsNumber	scfRotationEntry.2	INTEGER	R	parts number(*1)
scfRotationSubIndex	scfRotationEntry.3	INTEGER	R	senser number(*2)
scfRotationStatus	scfRotationEntry.4	INTEGER	R	status of value(*3)
scfRotationValue	scfRotationEntry.5	INTEGER	R	value (unit : 1 rpm)

(*1) : see table B-1-P "Part number table".
(*2) : Identification number, in installing of two or more sensors on same parts.
(*3) : invalid(1) / valid(2).

Next : C.4 TRAP

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C.4 TRAP

The following information is included in SNMP-TRAP of XSCF.

- enterprise ID : The object ID which identifies equipment classification.
- agent-address : The IP address of XSCF which sent trap.
- generic-trap : Standard Trap number.
- specific-trap : FUJITSU extended Trap number.
- time-stamp : Time of sending trap on the basis of a XSCF SNMP agent starting. [The unit is 10ms.]
- variable-bindings : Additional information of trap.

The tables below explain the Standard TRAP and the Fujitsu extended TRAP.

Table C-13 Standard TRAP

TRAP-TYPE	enterprise ID	generic-trap	specific-trap	variable-bindings	MEANING
authentication Failure	snmp (1.3.6.1.2.1.11)	4	0	-	An access by the wrong community name was detected by SNMP-Agent.

Table C-14 Fujitsu extended TRAP

TRAP-TYPE	enterprise ID	generic-trap	specific-trap	variable-bindings	MEANING
scfHardware DefectSet	scfObjects (1.3.6.1.4.1.211.1.1.15.2.1)	6	1	scfServerName scfTrapTime scfHWErrComment scfHWConfAddr	The Alarm level error(*1) occurred in a parts of server.
scfHardware DefectUnset	scfObjects (1.3.6.1.4.1.211.1.1.15.2.1)	6	2	scfServerName scfTrapTime scfHWErrComment scfHWConfAddr	An Alarm level faulty-part was exchanged, but any Warning level parts(*2) still remains in the server.
scfHardware ErrorSet	scfObjects (1.3.6.1.4.1.211.1.1.15.2.1)	6	3	scfServerName scfTrapTime scfHWErrComment scfHWConfAddr	The Warning level error occurred in a parts of server.
scfHardware ErrorUnset	scfObjects (1.3.6.1.4.1.211.1.1.15.2.1)	6	4	scfServerName scfTrapTime scfHWErrComment scfHWConfAddr	An Faulty-part was exchanged, and as a result, all the faulty-parts in the server disappeared.
scfAgentStart	scfObjects (1.3.6.1.4.1.211.1.1.15.2.1)	6	5	scfServerName	The agent function was started.
scfHardware ErrorRepair	scfObjects (1.3.6.1.4.1.211.1.1.15.2.1)	6	6	scfServerName scfTrapTime scfHWErrComment scfHWConfAddr	An Warning level Faulty-part was exchanged, but any Faulty-parts still remains in the server.
scfHardware DefectRepair	scfObjects (1.3.6.1.4.1.211.1.1.15.2.1)	6	7	scfServerName scfTrapTime scfHWErrComment scfHWConfAddr	An Alarm level Faulty-part was exchanged, but any Alarm level parts still remains in the server.

(*1): The fatal problem that the system cannot continue operation.
(*2): The slight problem that the system can continue operation.

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Next: "Appendix D Trouble shooting"

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Appendix D Troubleshooting

This chapter describes problems that can occur during use of the XSCF console or during operation of the system and provides solutions for them.

This chapter has the following contents.

Contents:

D.1 Troubleshooting XSCF and FAQ D-2
D.2 Troubleshooting the Server While XSCF Is Being Used D-9

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D.1 Troubleshooting XSCF and FAQ

This section describes problems that can occur while XSCF is being used and provides solutions for them.

In addition, FAQ is described.

Could not log in to XSCF

- Check whether you used the correct user name and if you use the XSCF Web function, check whether the same user name is already logged in.
- Check whether you used the correct password.
- Check the number of XSCF users. For the number of users, see "Chapter2 Setting Up XSCF" and "Chapter 3 Connecting XSCF to Terminal".

Forgot login keyword for XSCF

- Set the keyword again by setting command. For the default value of the login keyword, see "Chapter6 How to Use the XSCF Command Shell".

Forgot login password for XSCF

- Set your password again from the Machine Administration Menu. (*)

Could not connect to XSCF via the serial port

- Check whether the correct login keyword was used.
- Check whether the terminal software has been connected to the serial port.
- Chech the setting of the terminal software. (Baud rate ; 9600bps, Delay ; except for 0. etc) For information about the setting, see "Connecting to XSCF via the serial port (tty-a) " in "Chapter3 Connecting XSCF or Server".

Could not connect using telnet to XSCF via the SCF-LAN

- Check whether the SCF-LAN settings by the Machine Administration Menu have been enabled. (*)
- Check whether the telnet settings have been enabled by a command of Machine Administration function.
- Check whether the entered IP address and port number are different from the settings.
- Check whether someone have already logged in to XSCF by using telnet port.
- If necessary, please use the console you can access from PC which is directly connected to XSCF by serial port (tty-a). Then login to the XSCF Shell and check the the status of SCF-LAN settings with "lan-conifg" command.

Could not connect using SSH to XSCF via the SCF-LAN

- Check whether the SCF-LAN settings by the Machine Administration Menu have been enabled. (*)
- Check whether the SSH settings have been enabled by a command of Machine Administration function.
- Check whether the entered IP address and port number are different from the settings.
- Check whether someone have already logged in to XSCF by using SSH port.
- If necessary, please use the console you can access from PC which is directly connected

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to XSCF by serial port (tty-a). Then login to the XSCF Shell and check the the status of SCF-LAN settings with "lan-conifg" command.

- Check whether the host key is set up correctly. In addition, if you replace a system board, the host key is initialized by the pre-configured key which XSCF has.
- Check whether the cliant soft is set up correctly.

Output on Standard console(OS console) connected to the LAN suddenly stopped

- The reason could be the command of XSCF, which change the destination of console output to the serial port (tty-a or tty-b), was used on a XSCF shell. Besides, it has been changed similarly from the Machine Administration Menu. (*) Execute the show-event-log command to view any changes to console operation.
- If you are in the environment which cannot use the XSCF shell terminal(when you don't set up "User Account Administration"), you are able to change the standard console to the serial port(tty-a) forcibly. For the processing to change, see "Chapter 3 Connecting XSCF to Terminal".

A console the XSCF shell or a standard console was suddenly disconnected

- After someone set "Network Configuration" or "Name Server Configration" of the "XSCF administration" menu (*) or execute the firmware update on the Machine Administration Menu, immediately, a console of the XSCF shell and a standard console are disconnected. Please login again when you use the XSCF.

XSCF shell was suddenly disconnected while using SSH

- After login to the XSCF shell, if there is no activity for a predetermined time, XSCF automatically terminates the shell. When the time monitoring function has been enabled and a time has been specified in the XSCF settings, forced termination occurs if the time elapses.
- SSH cliant of Solaris Secure Shell or Open SSH disconnect by entering a keyword(~.)(tilde | period).

A mail report was not received from XSCF

- XSCF does not report all events. It sends mail for faulty parts, an authentication failure event, and testing. See the event logs list in "Appendix B XSCF Log Information" to check if the expected report is in the error log or if the report is an event that is reported in the event log.
- Select "Show Current Configuration" in "Mail administration" of the Machine Administraion Menu and check whether to have completed the Mail report from XSCF normally. (*) If the e-mail is not received, the mail is sent to the destination for undelivered mail or the error logs is recorded, so check them.
- Check whether there is the address restrictions if you receive the email by the cell phone.

Could not access the top page of the XSCF Web function

- Check whether the settings for the XSCF Web function have been enabled.
- Check whether the correct URL was input. (For example, "s" of "https" is not added.)
- Check whether an allowed IP address was specified.
- Check whether SSL and TLS are enabling in the browser settings.

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Could not display the login screen of the XSCF Web function

- If pressing the login button on the top page of the XSCF Web function fails to display the login screen, JavaScript may be disabled in the browser settings. Enable JavaScript and log in again.
- When the creating of Pop-up window is prohibited in the browser settings, XSCF Web function fails to display the login screen. Enable it and log in again.

Could not log in to XSCF Web function

- Someone might have been logging in to XSCF from the same account.
  You can't log in from the account, until a person who logged in to XSCF will log out.
- You might have terminated without log out.
  You can't log in from the account, until XSCF Auto-disconnect time passes.
  But when you want to use the account immediately, please do the following:
  1) Log in to XSCF Web function from another account and check the elapsed time from the last access time about the account by the access status page.
  2) Update the Auto-disconnect time to the check time as above by Machine Administration Menu. (*)
  3) Login to the XSCF Web Function from the account.
  4) Change the Auto-disconnect time to the original one.

Forgot the authentication information for the XSCF Web function

- Since authentication of XSCF Web function is the same as authentication for the XSCF shell, see the explanation above , "Forgot login password for XSCF".

Failed the first access to the XSCF Web function after log in

- Check whether the browser accepts the cookie in its settings.

The Web screen of the XSCF Web function is not displayed correctly

- The screen might not be displayed correctly because of the version of the browser. See "Supported browsers" in "Chapter5 How to Use the XSCF Web Function" and switch to the latest browser.

Could not add an XSCF user

- Check the number of XSCF users. For the number of users, see "Chapter2 Setting Up XSCF" and "Chapter 3 Connecting XSCF to Terminal". Alternatively, contact the system administrator.

The XSCF shell was forcibly terminated while it was being used

- After login to the XSCF shell, if there is no activity for a predetermined time, XSCF automatically terminates the shell. When the time monitoring function has been enabled and a time has been specified in the XSCF settings, forced termination occurs if the time elapses.

The XSCF Web function was forcibly terminated

- After login to the XSCF Web function page, if there is no activity for a predetermined time, XSCF terminates the Web page. Since this time monitoring function is always enabled, if the predetermined time elapses, a message reporting forced termination is displayed the next time an access is made. Pressing the OK button closes all frames and causes the login screen to appear. Log in again.

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Do not know the IP address of XSCF

- To check the current network configuration, choose "Network Configuration" of the the Machine Administration Menu. (*) If it shows no IP address infomations, contact the network administrator to get it.

Could not power on or off the server

- If you do not have root-level authority, you cannot power on or off the server. For the user authority, see "Chapter6 How to Use the XSCF Command Shell".

Could not power on or off the server on the remote panel

- If you do not have root-level authority, you cannot power on or off the server.
- When the XSCF Web function has been set to read-only mode, you cannot power on or off the server.

Other problems

- Contact the system administrator. When an XSCF dump is required, use the Machine Administration Menu. For information about obtaining a dump, see "Appendix 10 XSCF Firmware Upgrade and Dump".

* It is possible setting/to display it even by the command of the Machine Administration function since ESF2.5.1. For detail about the command of the Machine Administration function, see the *Enhanced Support Facility User's Guide for Machine Administration* for the ESF.

- FAQ -

Q1. When OS and ESF are not installed, can I set up the SCF-LAN only by XSCF?

You cannot set up the SCF-LAN only by XSCF. When OS and ESF are not installed, it means that there is no system administrator of the server. In the server to which the system administrator is not registered, the data integrity of the configuration information cannot be kept. Therefore, the SCF-LAN settings("Network configuration") cannot be set up. After installing OS, ESF, please set up the SCF-LAN.

Q2. Is IP address allocated by the default for the SCF-LAN port?

IP address is not allocated in the SCF-LAN port by the default. If the IP address is allocated by the default, the IP address might temporarily overlap in each server when you set up the two or more servers at the same time. This has the possibility to influence the environment of the user LAN. To avoid the confusion, the SCF-LAN network function is disabled by default.

Q3. Can I connect the SCF-LAN to the Basic-LAN?

Yes, you can. There are three LAN ports called "Basic-LAN", "Extended-LAN" or "SCF-LAN" in the server. You can connect the SCF-LAN with user LAN(Basic LAN and Extended-LAN). For more information about the connection of the SCF-LAN, see "Chapter3 Connecting XSCF or

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Server".

Q4. During power on and startup OS, if the OS hangs up, can I power off the server by using XSCF function?

When the OS hangs up, you should not power off the server first but do the following:

1. First, please push the request switch on the remote panel of the XSCF Web function, or push the request switch on the operation panel of the server, or issue the "request" command by using the XSCF Shell, then the OS dump is executed.

2. After processing No.1, if the OS dump failed, please send a "Break", or push the reset switch on the remote panel of the XSCF Web function, or push the reset switch on the operation panel of the server, or issue the "xir" command by using the XSCF Shell, then the server returns the ok prompt. And type the "sync" command.

3. After processing No.2, if reset operating or the "sync" command failed, please issue the "por" command by using the XSCF Shell or forcibly power off in the following methods.

There are the following three methods to power off the server forcibly.

Method 1: Push the power switch button for 10 seconds on the operation panel of the server.
Method 2: Push the power switch button for 10 seconds on the remote panel of the XSCF Web function.
Method 3: Issue the "power-off" command by XSCF Shell.

Q5. What does the XSCF do from turning on the input power to OS starts?

The following is the process until the system starts up.

1. The input power source is turned on by operator.
2. XSCF starts.
3. The server is powered on and is initialized by XSCF.
4. POST starts and diagnoses the hardware.
5. OBP starts.
6. The boot process is started by OBP
7. OS starts up.

Q6. What messages are found on the screen when I succeed in the XSCF login or XSCF logout?

The XSCF login success examples :

```
SCF Shell
login:root
Password:
```


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SCF Version xxxxxxxx
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[192.168.1.2]

The Login failure example :
SCF Shell
login:root
Password:
ERROR: Login incrrect

The XSCF Logout success examples :
SCF> exit
logout

The Logout failure example :
SCF> exit
Wrong name of Command

Q7. I want to check whether the XSCF e-mail is sent by generating an error by XSCF. What should I do?

Please issue "logtest" command by XSCF Shell. Then the error is logged and e-mail is sent.
For information about the XSCF shell commands, see "Chapter6 How to Use the XSCF Command Shell".

Note:
After checking the e-mail, you should clear the hardware error event in the "Hardware monitoring information" of Machine Administration Menu. For the menu, see the *Enhanced Support Facility User's Guide for Machine Administration* for the ESF.

Q8. When the standard console(OS console) of XSCF is connected via the serial port(tty-a), if you type ~.(tilda | period), it becomes the login window. How can I make the login window return to the standard console without login? Should I wait for several minutes?

Even if you wait a lot of time, you cannot return to the standard console from the login window.
Please push the Enter-key 5 times or more continuously to make the login fail.
In addition, the e-mail is sent when the XSCF Mail function is is enabled.

Q9. What is the relation between the error information of the XSCF error logs and MIB file?

The error information of MIB file is the newest error log of XSCF.

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Q10. How to initialize the XSCF Network Configuration?

Select "Network Configuration" in "XSCF Administration" menu of the Machine Administration Menu. Please initialize in the following procedures.

1. Select "IP Address" in "Network Configuration" menu by number.
2. Next, please set an IP address as a blank. And hit a return key.
3. Then, select "Save Configuration" in "Network Configuration" menu and execute it.

The Initialization of "Network Configuration" is completed at this time.

Next: D.2 Troubleshooting the Server While XSCF Is Being Used

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D.2 Troubleshooting the Server While XSCF Is Being Used

This section explains how to effectively use XSCF when a problem such as no response from the server occurs on the server, or when a panic occurs.

Before contacting service

Before contacting service, first try the procedure given below. This procedure may not only be helpful in solving the problem but also could eliminate the need to make an inquiry.

8. If the server does not respond, set the mode switch on the operating panel to MAINTENANCE mode.
9. Confirmed the system by either of the following methods.

● When you **cannot use** the XSCF Web function nor the XSCF shell via telnet or serial port.

a. Change the mode switch on front panel to "MAINTENANCE" position.

b. Connect a terminal to the XSCF's serial port. Then Input the login keyword("~.") to XSCF shell. This combination is the default value. For changing the keyword, see "Chapter6 How to Use the XSCF Command Shell".

c. The system message is displayed with the initialization message before the login prompt of the XSCF shell is displayed.

When the hardware error has been detected by XSCF, any trouble is notified by this system message. So please deal based on the message.

● .When you **can use** the XSCF Web function or the XSCF shell via telnet or serial port.

a. Use the XSCF account to log in to XSCF.

b. Connect to the SCF-LAN port and **use the XSCF Web function (see Chapter 5) to try to check the error logs.** Please refer to the method of dealing with this manual appendix B.

c. **Please check the XSCF's event log and the server status of by using the XSCF shell** via a telnet or a serial port.

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Please confirm the event which has happened at time that the problem occurs by using below commands.

show-error-logs
show-event-logs
show-power-logs
show-console-logs

If you find an error, please refer to the method of dealing with this manual appendix B.

d. Check the XSCF console log or panic log for the latest messages. The message might be displayed as OS detects the problem. About Panic, please confirm the event which has happened at time that the problem occurs by using **"show-panic-logs"** command. For using the command, see "Chapter6 How to Use the XSCF Command Shell".

10. Please restart the system if you cannot find out any problem in the above-mentioned check points.
11. If you found any hardware failure, take action according to the method written on appendix B, such as, replace a part with using Machine Administration Menu.

Next: "Glossary"

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Glossary

This appendix is a glossary of XSCF-related terms used in this manual.

A:

[ACK] An abbreviation of acknowledgement. ACK is a positive response transmitted from the sending PC to the receiving PC in communication between PCs. It is transmitted, for example, when a data transfer has ended successfully.
When all data has been received without error, the receiving PC sends an ACK packet. Conversely, if corrupted data is received, the receiving PC requests retransmission.

[ACK timeout] The time allowed for an acknowledgement to be sent from the sending PC to the receiving PC.

[APCS] Automatic power control. The generic term for functions of PRIMEPOWER series machines supported by the Enhanced Support Facility (ESF) that control power supply schedules.

[ATAPI] An abbreviation of AT Attachment Packet Interface. A standard made to connect devices other than HDD such as CD-ROM with controller IDE.

B:

[Bank] An area used when a physical memory is divided into areas for management purposes. A bank required for an area specified in the address space is allocated each time it is used. The bank must be changed if a different bank is accessed.

C:

[CCU] An abbreviation of Console Connection Unit. A console connection unit converts the input and output of a serial-connected console for the LAN and converts the transmission data from a LAN-connected terminal.

[CE] An abbreviation of correctable error.

[Checksum] A method used to check for corrupted data. The data is sent with a sum. The receiving end calculates the sum of the received data and compares it with the sum calculated at the sending end.

[Cluster control software] This software is a fourth-generation clustering solution that provides high availability and scalability, which is independent of the operating system and hardware platform. In the software product, there are PRIMECLUSTER and SafeCLUSTER.

[CPUDDC] The DDC for the CPU core. CPUDDC is mounted on the CPU module.

D:

[DDC] An abbreviation of DC-DC converter. A DDC converts one direct-current voltage to another direct-current voltage.

[DDC-A] A DDC mounted on a system board that supplies 1.8 V.

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[DDC-B] A DDC mounted on a system board that supplies 2.5 V.

[DDC-C] A DDC mounted on a system board that supplies 1.25 V.

[DIMM] An abbreviation of dual in-line memory module. DIMMs are memory modules that are mounted on the motherboard.

E:

[ECC] An abbreviation of Error Check and Correction. ECC is a mechanism for monitoring memory operation. When ECC detects a one-bit memory error, it automatically corrects the error and operation continues. ECC also detects two-bit memory errors.

[EEPROM] An abbreviation of electrically erasable programmable read-only memory. EEPROM is ROM whose contents can be electrically reprogrammed.

[EPROM] An abbreviation of erasable and programmable read-only memory. EPROM is electrically erasable and programmable read-only memory.

[Erase] The operation of erasing memory or a disk.

[External power controller] A controller that provides, among other functions, a conversion function between the power/environment control interface (RCI) and other power/environment control interfaces (including power control, status monitoring, and disaster-prevention panel control).

F:

[FAN-JT] A fan board.

[Fatal] The state resulting from the occurrence of a fatal error.

[FMEM] An abbreviation of flash memory. FMEM is a nonvolatile PROM on which data can be erased electrically either by sector (block) or for the entire chip. Nonvolatile memory retains data when power is turned off.

[FRU] An abbreviation of field-replaceable unit.

H:

[HPC] An abbreviation of Hot Plug Controller. The Hot plug controller of component that you can exchange and detach without system shutdown or reboot.

I:

[IDE] Bus of easy circuit composition to connect hard disk or CD-ROM drive.

[Inlet] An intake vent.

[IO-BP] An abbreviation of IO Back Panel.

J:

[JTAG] An abbreviation of Joint Test Action Group. It generally indicates the boundary scan architecture, of which test method was standardized as EEE1149.1, and its serial port.

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The boundary scan is the architecture that allocates between the core logic and the pin a register called cell equivalent to the test probe and that, if it is a shift register, enters the input signal from the shift register and examines the output result.

N:

[Neuron] The component in which the RCI interface controller operates.

[NVRAM] An abbreviation of nonvolatile RAM. For ordinary RAM, its contents are lost when power is no longer supplied. NVRAM, however, retains its contents when power is turned off.

O:

[OBP-FMEM] An FMEM for the OBP. See FMEM.

P:

[Panel] A part, on the front of a server, that contains the power switch button, LEDs, and similar items used by the operator.

[Panic] Abnormal termination of the OS.

[PC] (1) An abbreviation of personal computer. (2) An abbreviation of Power Control.

[PCI] An abbreviation of Peripheral Component Interface, which is an IEEE standard. The PCI is one of the standards used for installation of expansion boards in a PC or workstation and often indicates the location of the expansion board on the motherboard.

[PCI-BD] A PCI board.

[PLL] An abbreviation of phase-locked loop. A phase-coherent loop, the PLL is a circuit technology that generates an output signal having a frequency and phase adjusted to those of the input signal.

[POST/OBP] An abbreviation of Power On Self Test/OpenBoot PROM. The hardware initial diagnostics function for hardware that is executed when power is turned on.

[POWER-BD] A POWER board. The board for power supply distribution.

[PROM] An abbreviation of programmable ROM. PROM is ROM to which data can be written.

[PSU] An abbreviation of power supply unit.

[PSU-CAGE] A box which stores PSU.

R:

[RAS] An abbreviation of reliability, availability, and serviceability.

[RAS-DB] An XSCF firmware resource that implements the RAS function in XSCF.

[RCI] An abbreviation of Remote Cabinet Interface. The RCI is the power and system control interface that connects units, including processors and expansion file units, and performs such functions as power supply interlock and alarm notification and recognition.

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[RCI address] The address by which each device used by the RCI is recognized.

[RCI device or RCI I/O] A device connected by the RCI. The server, external power controller, disk drive, and circuit switch are some of the devices connected by the RCI.

[RCI-Neuron] A chip that controls the RCI. Neuron.

[Read-only console] An OS console used for display only. On a terminal connected to the SCF-LAN, starting telnet and specifying port number 8011 or 8013 establishes a connection. 8011 port can be used by up to two users per server. 8013 port can be used by only one user per server (Used only as the remote console port). When you use the SSH function, specify port number 8811 or 8812. Each SSH port can be used by only one user per server. Since the Read-only console is independent of the console switching executed by the XSCF command, the console display is available at all while the OS is running.

[REMCS] An abbreviation of REMote Customer Support System. This System use the REMCS agent which is software we developed to use REMCS. This provides an advanced remote support service by connecting the user's server with the REMCS center by the Internet. If an error will occur, system send the error information which is needed to the REMCS center, immediately.
In addition, XSCF send the information to REMCS center even if system is down.

[RS-232C] An interface standard used to connect a PC to another PC or to a peripheral device for the purpose of exchanging data. The standard, established by the Electronic Industries Association (EIA) in the United States, is used by most PCs as the usual input and output serial interface. The interface can be used to connect a PC to a printer, plotter, mouse, and similar devices.

S:

[SB] An abbreviation of system board.

[SC] An abbreviation of system controller. The SC controls the coherency of the cache among CPUs.

[SCF] An abbreviation of System Control Facility. The SCF is the system monitoring and control facility. It is the same facility as XSCF.

[SCFC] A chip that can be programmed for the SCF function.

[SCF-FMEM] An FMEM for the SCF firmware.

[SCF-SDRAM] An SDRAM for the SCF firmware.

[SCSI-BP] A SCSI board.

[SDRAM] An abbreviation of synchronous DRAM.

[SLOT] See DIMM.

[SMTP] An abbreviation of Simple Mail Transfer Protocol. SMTP is a protocol for sending e-mail on the Internet or an intranet. It is used to transmit mail between servers and to send mail from a client to the server.

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[SNMP] An abbreviation of Simple Network Manager Protocol. SNMP is a protocol for network management that enables the SNMP manager to centrally manage the operating status and fault status of terminals on the network.

[SNMP trap] A trap issued by the SNMP manager.

[SSH] An abbreviation of secure shell. A high security remote shell mechanism that encrypts data that will be transmitted on the Internet. All communication route can be encrypted by using SSH when you use the function of shell, such as TELNET and rsh by remote operation, so you can prevent packet tapping.

[SSL] An abbreviation of secure socket layer. A security mechanism that encrypts data that will be transmitted on the Internet. Netscape Navigator and Microsoft Internet Explorer support SSL. When a Web page ready for SSL is accessed, the key symbol in the browser is locked and a warning message is displayed.

[Standard console] An OS console on which input and output are enabled. The OS console can be used in both an SCF-LAN connection and a serial connection. On a terminal connected to the SCF-LAN, starting telnet and specifying port number 23 establishes a connection. When SSH is used, the port number is 22. The standard console can also be used by connecting a PC to the serial port and turning on the server. Only one user per server can use the LAN port of the standard console. On the Machine Administration Menu or the command of the Machine Administration function (*) , you can select whether to use a standard console via the serial port (tty-a) or the SCF-LAN port.

* The command is at ESF2.5.1 or later.

[System control bus] The bus used for communication between system components and for monitoring of the environment.

T:

[TTY] An abbreviation of teletypewriter. Generally a unit for displaying input and output characters on the console or its virtual feature simulated by hardware or software.

[TTY-A] The serial port usually used for the standard console and XSCF shell.

[TTY-B] The serial port usually used for a serially-connected unit such as the external clock device.

U:

[U2-Cache] The secondary cache of a CPU.

[U2P] An abbreviation of UPA to PCI. The LSI circuitry between the UPA bus and the PCI bus.

[UART] An abbreviation of universal asynchronous receiver transmitter. A UART is a telecommunication circuit used for the serial port of a PC or similar device. It converts the parallel signal sent from the PC to a serial signal and the serial signal sent from a peripheral device to a parallel signal.

[UE] An abbreviation of uncorrectable error.

[UPA] An abbreviation of Ultra Port Architecture. UPA is the protocol specifications for connecting

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the CPU, IO, memory, and other components. It is used as the interface between the CPU and SC, U2P and the SC, and the SC and XB.

[UPC] An abbreviation of uninterruptible power control. UPC is an interface port with an uninterruptible power supply unit.

[UPS] An abbreviation of uninterruptible power supply unit. An uninterruptible power supply unit is connected for backup power control purposes in the event of a power outage. This equipment or unit ensures the continuous supply of power, without service interruption (no interruptions of communication), when the normal power equipment fails or a blackout occurs.

W:

[WEBDATA] An XSCF firmware resources that implements the XSCF Web function.

[WDT] An abbreviation of watchdog timer. The watchdog timer, built into the CPU, checks whether the system operating status is normal. If it detects abnormal operation, it immediately issues an interrupt to the CPU to notify it of the abnormal condition.

X:

[XB] An abbreviation of crossbar. XB is a data crossbar that connects the CPU and memory, U2P and memory, and connects the CPU and U2P.

[XIR] An abbreviation of externally initiated reset. A XIR resets the server CPU.

[XSCF] An abbreviation of Extended System Control Facility. XSCF is a system monitor and control facility. It is also referred to as the SCF.

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